Incident Number: nAPP2332135027

Release Assessment and Deferral

James Ranch Unit DI 2 CTB

Section 25, Township 22 South, Range 30 East

Facility: fAPP2126355247

County: Eddy

Vertex File Number: 23E-06065

Prepared for:

XTO Energy, Inc.

Prepared by:

Vertex Resource Services Inc.

Date:

August 2024

Release Assessment and Deferral
James Ranch Unit DI 2 CTB
Section 25, Township 22 South, Range 30 East
Facility: fAPP2126355247
County: Eddy

Prepared for:
XTO Energy, Inc.
3104 Greene Street
Carlsbad, New Mexico 88220

New Mexico Oil Conservation Division – District 2
508 West Texas Avenue
Artesia, New Mexico 88210

Prepared by:
Vertex Resource Services Inc.
3101 Boyd Drive
Carlsbad, New Mexico 88220

Sally Carttar
Sally Carttar, BA
PROJECT MANAGER, REPORT REVIEW

November 15, 2024
Date

Table of Contents

In-text Tables

List of Figures

List of Tables

List of Appendices

1.0 Introduction

XTO Energy, Inc. (XTO) retained Vertex Resource Services Inc. (Vertex) to conduct a Release Assessment and Deferral for a produced water release that occurred on November 13, 2023, at James Ranch Unit DI 2 CTB (hereafter referred to as the "site"). XTO submitted an initial C-141 Release Notification (Appendix A) to New Mexico Oil Conservation Division (NMOCD) District 2 on November 17, 2023. Incident ID number nAPP2332135027 was assigned to this incident.

This report describes the release assessment and remediation activities associated with the site. The information presented demonstrates that closure criteria established in Table I of 19.15.29.12 of the *New Mexico Administrative Code* (NMAC; New Mexico Oil Conservation Division, 2018) related to NMOCD have been met and all applicable regulations are being followed. This document is intended to serve as a report to obtain deferral from NMOCD for all areas of this release under production equipment, with the understanding that final closure of the release site will be deferred until all oil and gas activities are terminated and the site is reclaimed as per NMAC 19.15.29.13.

2.0 Incident Description

The release occurred on November 13, 2023, due to failures of a nipple and gauge on the LACT unit. The incident was reported on November 17, 2023, and involved the release of approximately 10.61 barrels (bbl) of crude oil on the pad site. Approximately 8 bbl of free fluid was removed during initial clean-up. Additional details relevant to the release are presented in the C-141 Report.

3.0 Site Characteristics

The site is located approximately 16 miles northeast of Loving, New Mexico (Google Inc., 2024). The legal location for the site is Section 25, Township 22 South, and Range 30 East in Eddy County, New Mexico. The release area is located on Bureau of Land Management property. An aerial photograph and site schematic are presented on Figure 1.

The location is typical of oil and gas exploration and production sites in the Permian Basin and is currently used for oil and gas production and storage. The following sections specifically describe the release area on or in proximity to the constructed pad (Figure 1).

The Geological Map of New Mexico (New Mexico Bureau of Geology and Mineral Resources, 2024) indicates the site's surface geology primarily comprises Qep - Eolian and piedmont deposits (New Mexico Bureau of Geology and Mineral Resources, 2024). The karst geology potential for the site is low (United States Department of the Interior, Bureau of Land Management, 2018). The surrounding landscape is associated with plains and fan piedmonts with elevations ranging between 2,000 and 5,700 feet. The climate is semiarid with average annual precipitation ranging between 5 and 15 inches. Predominant soil textures around the site are well-drained fine sands and fine sandy loams with low runoff potential (United States Department of Agriculture, Natural Resources Conservation Service, 2024). Using information from the United States Department of Agriculture, the dominant vegetation was determined to be grasses interspersed with shrubs and half-shrubs (United States Department of Agriculture, Natural Resources Conservation Service, 2024). Limited to no vegetation is allowed to grow on the compacted facility pad.

4.0 Closure Criteria Determination

The nearest active well to the site is a United States Department of Energy monitoring well 0.77 miles to the north. There is no surface water present at the site. The nearest significant watercourse, as defined in Subsection P of 19.15.17.7 NMAC, is an intermittent stream located approximately 5,105 feet north of the site (United States Fish and Wildlife Service, 2024). At the site, there are no continuously flowing watercourses or significant watercourses, lakebeds, sinkholes, playa lakes or other critical water or community features as outlined in Paragraph (4) of Subsection C of 19.15.29.12 NMAC

The nearest depth to groundwater reference to the site is an exploratory borehole advanced 0.95 miles to the northeast on December 15, 2023. The borehole was terminated at 55 feet below ground surface (bgs) without encountering the water surface (New Mexico Office of the State Engineer, 2024). Information pertaining to the depth to ground water determination is included in Appendix B.

Table 1. Closure Criteria Determination			
Site Name: James Ranch Unit DI 2 CTB			
Spill Coordinates: 32.36265, -103.83733		**X: 609389**	**Y: 3581228**
Site Specific Conditions		**Value**	**Unit**
1	Depth to Groundwater (nearest reference)	>55	feet
	Distance between release and nearest DTGW reference	**5,010**	feet
		0.95	miles
	Date of nearest DTGW reference measurement	December 15, 2023	
2	Within 300 feet of any continuously flowing watercourse or any other significant watercourse	5,105	feet
3	Within 200 feet of any lakebed, sinkhole or playa lake (measured from the ordinary high-water mark)	6570 ft	feet
4	Within 300 feet from an occupied residence, school, hospital, institution or church	12,098	feet
5	i) Within 500 feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, **or**		feet
	ii) Within 1000 feet of any fresh water well or spring	4,071	feet
6	Within incorporated municipal boundaries or within a defined municipal fresh water field covered under a municipal ordinance adopted pursuant to Section 3-27-3 NMSA 1978 as amended, unless the municipality specifically approves	No	(Y/N)
7	Within 300 feet of a wetland	10503 ft	feet
8	Within the area overlying a subsurface mine	No	(Y/N)
	Distance between release and nearest registered mine	14,251	feet
9	Within an unstable area (Karst Map)	Low	Critical High Medium Low
	Distance between release and nearest unstable area	**7,743**	feet
10	Within a 100-year Floodplain	>500	year
	Distance between release and nearest FEMA Zone A (100-year Floodplain)	24,023	feet
11	Soil Type	Fine sand, fine sandy loam	
12	Ecological Classification	Range-Loamy Sand	
13	Geology	Eolian and piedmont deposits	
	NMAC 19.15.29.12 E (Table 1) Closure Criteria	<50'	<50' 51-100' >100'

The depth to groundwater reference exceeded 0.5 miles from the release area; therefore, the closure criteria for remediation and reclamation of the site was determined to be associated with the strictest constituent concentration limits as presented in Table 2.

Table 2. Closure Criteria for Soils Impacted by a Release DTGW <50 feet bgs

Minimum depth below any point within the horizontal boundary of the release to groundwater less than 10,000 mg/l TDS	Constituent	Limit
< 50 feet	Chloride	600 mg/kg
	TPH (GRO+DRO+MRO)	100 mg/kg
	BTEX	50 mg/kg
	Benzene	10 mg/kg

DTGW – depth to groundwater
TDS – total dissolved solids
TPH – total petroleum hydrocarbons, GRO – gas range organics, DRO – diesel range organics, MRO – motor oil range organics
BTEX – benzene, toluene, ethylbenzene and xylenes

5.0 Remedial Actions Taken

Inspection and site characterization of the release around the infrastructure was completed by Vertex between January 16 and June 25, 2024, including vertical and horizontal delineation. The total impacted area was determined to be 1,612 square feet. The Daily Field Reports (DFRs) associated with the site visits are included in Appendix C. Characterization sample locations and approximate release areas are presented on Figure 1. Characterization field screening and laboratory results are summarized in Table 3.

Remediation efforts began on April 10, 2024, and were finalized on April 29, 2024. OCD approved an extension for the release on April 25, 2024 (Appendix D). Vertex personnel supervised the excavation of impacted soils. Field screening was completed on a total of 18 sample points. It consisted of analysis using a Photo Ionization Detector (volatile hydrocarbons), Dexsil Petroflag using EPA SW-846 Method 9074 (extractable hydrocarbons) and Silver Nitrate Titration (chlorides). Field screening results were used to identify areas requiring further remediation. Soils were removed to a depth of 1 feet bgs. Impacted soil was transported by a licensed waste hauler and disposed of at an approved waste management facility. Daily Field Reports documenting various phases of the remediation are presented in Appendix C. Vertex supervised remediation of two separate incidents simultaneously on those dates and the incident in question (nAPP2332135027) is referred to as Phase 1 in the DFRs.

Notifications that confirmatory samples were being collected was provided to the NMOCD on April 5, 15, 18, and 25, 2024, and are included in Appendix D. Confirmatory composite samples were collected from the base and walls of the excavation in 200 square foot increments. A total of 18 base and wall samples were collected for laboratory analysis following NMOCD soil sampling procedures. Samples were submitted to the Hall Environmental Analysis Laboratory under chain-of-custody protocols and analyzed for BTEX (EPA Method 8021B), total petroleum hydrocarbons (GRO, DRO, MRO – EPA Method 8015D) and total chlorides (EPA Method 300.0). Laboratory results are presented in Table 4, and the laboratory data reports are included in Appendix E. All confirmatory samples collected and analyzed; samples

collected outside the deferral area were below closure criteria. Floor Samples BES24- (01, 02, 03) and wall samples WES24- (01, 02, 07, 09) inside the containment area will be deferred until the reclamation of the pad. Samples showing vertical and horizontal delineations are depicted on the table with an "*"

6.0 Deferral Request

Vertex recommends no additional reclamation or remediation actions to address the release at James Ranch Unit DI 2 CTB until the decommissioning of production equipment. The release area, with the exception of the deferral area, was fully remediated and backfilled with local soils by April 30, 2024. Laboratory analyses of the characterization samples showed constituent of concern concentration levels below NMOCD closure criteria for areas where depth to groundwater is "under 50 feet to groundwater" as shown in Table 2. There are no anticipated or imminent risks to human, ecological, or hydrological receptors associated with the release site including the deferral area.

On behalf of XTO Energy, Inc., Vertex requests that deferral for the incident (nAPP2332135027) be approved as all closure criteria set forth in Subsection E of 19.15.29.12 NMAC have been met in all areas not under equipment. XTO certifies that all information in this report and the attachments is correct and that they have complied with all applicable requirements and conditions specified in Division rules and directives to meet NMOCD requirements to obtain deferral on the releases at the site.

Vertex respectfully requests the deferral to be granted because the deferral area is next to infrastructure and equipment which further excavation could cause damage to infrastructure. The contamination is fully delineated and does not cause an imminent risk to human health, the environment, or groundwater. Final remediation and reclamation shall take place under 19.15.29.12 and 19.15.29.13 NMAC once the site is no longer being used for oil and gas operations.

Should you have any questions or concerns, please do not hesitate to contact Sally Carttar at 575.361.3561 or SCarttar@vertexresource.com.

7.0 References

Google Inc. (2024). *Google Earth Pro (Version 7.3.3)* [Software]. Retrieved from https://earth.google.com

New Mexico Bureau of Geology and Mineral Resources. (2024). *Interactive Geologic Map*. Retrieved from https://maps.nmt.edu/

New Mexico Office of the State Engineer. (2024). *New Mexico Water Rights Reporting System*. Retrieved from http://nmwrrs.ose.state.nm.us/nmwrrs/

New Mexico Oil Conservation Division. (2018). *New Mexico Administrative Code – Natural Resources and Wildlife Oil and Gas Releases*. Santa Fe, New Mexico.

United States Department of Agriculture, Natural Resources Conservation Service. (2024). *Web Soil Survey*. Retrieved from https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx

United States Department of Homeland Security, Federal Emergency Management Agency. (2024). *FEMA Flood Map Service: Search by Address*. Retrieved from https://msc.fema.gov/portal/search?AddressQuery=malaga%20new%20mexico#searchresultsanchor

United States Department of the Interior, Bureau of Land Management. (2018). *New Mexico Cave/Karst*. Retrieved from https://www.nm.blm.gov/shapeFiles/cfo/carlsbad_spatial_data.html

United States Fish and Wildlife Service. (2024). *National Wetland Inventory - Surface Waters and Wetlands*. Retrieved from https://fwsprimary.wim.usgs.gov/wetlands/apps/wetlands-mapper/

8.0 Limitations

This report has been prepared for the sole benefit of XTO Energy, Inc. This document may not be used by any other person or entity, except the New Mexico Oil Conservation Division and the Bureau of Land Management, without the express written consent of Vertex Resource Services Inc. (Vertex) and XTO Energy, Inc. Any use of this report by a third party, or any reliance on decisions made based on it, or damages suffered as a result of the use of this report are the sole responsibility of the user.

The information and conclusions contained in this report are based upon work undertaken by trained professional and technical staff following generally accepted scientific practices current at the time the work was performed. The conclusions and recommendations presented represent the best judgment of Vertex based on the data collected during the assessment. Due to the nature of the assessment and the data available, Vertex cannot warrant against undiscovered environmental liabilities. Conclusions and recommendations presented in this report should not be considered legal advice.

FIGURES

Borehole (Prefixed by "BH24-") Production Equipment Release Area (~ 1,623 sq. ft.)*

*Circumference of Release Area (~303 ft.)

VERTEX

0 25 50 ft

Map Center:
Lat/Long: 32.362650, -103.837330

NAD 1983 UTM Zone 13N
Date: Jul 17/24

N

Characterization Schematic
James Ranch Unit DI 2 CTB

FIGURE:
1

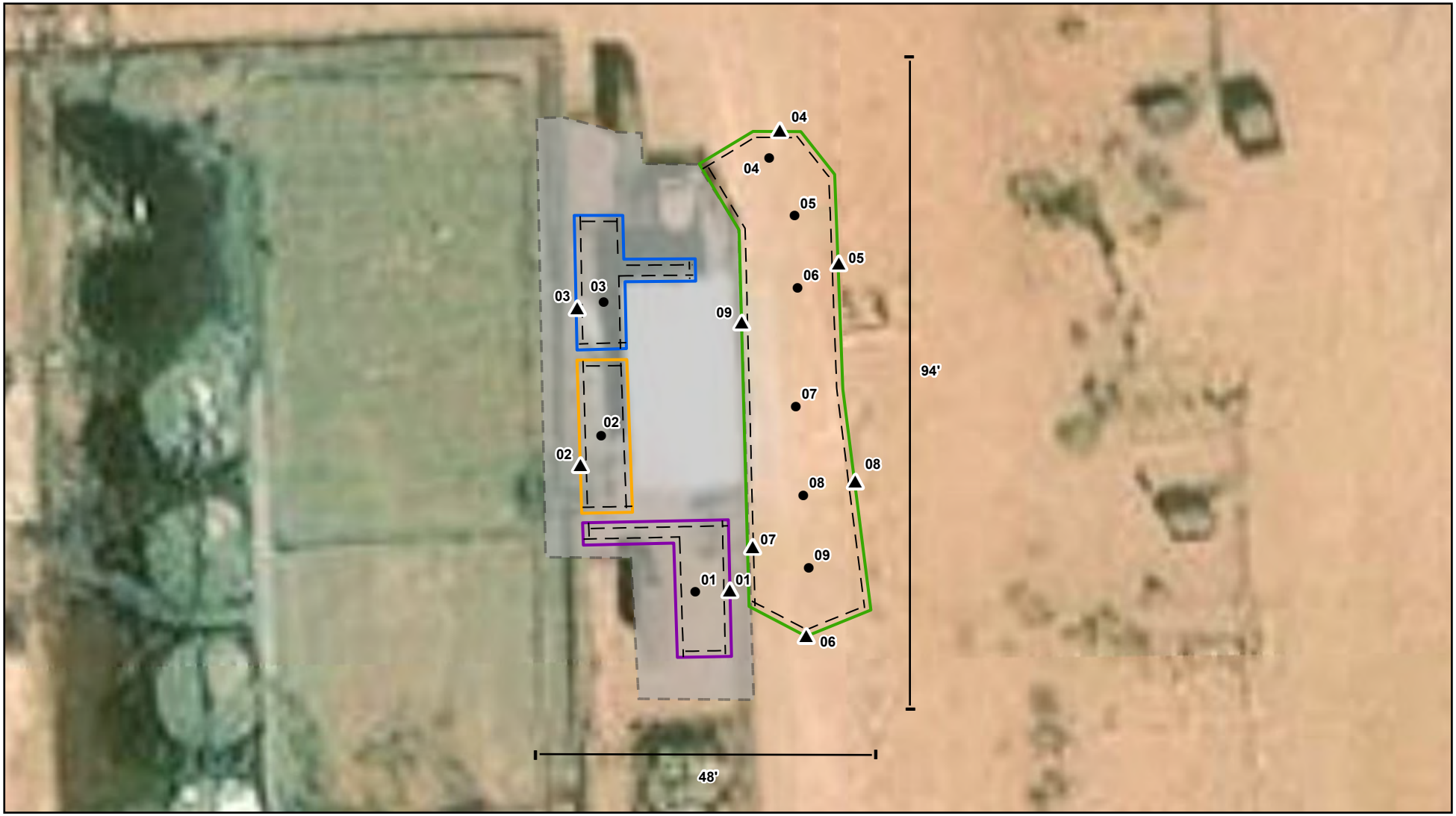
XTO ENERGY

Geospatial data presented in this figure may be derived from external sources and Vertex does not assume any liability for inaccuracies. This figure is intended for reference use only and is not certified for legal, survey, or engineering purposes.

Note: Georeferenced image from Esri, 2023. Site features from GPS by Vertex Professional Services Ltd., 2024.

VERSATILITY. EXPERTISE.

Document Path: G:\1-Projects_US PROJECTS\XTO Energy\23E-06065 - JRU DI 2\Figure 1 Characterization Schematic (23E-06065)ID18892.mxd



● Base Sample (Excavated) (Prefixed by "BES24-")

▲ Wall Sample (Excavated) (Prefixed by "WES24-")

Center Excavation 1' (~163 sq.ft.)

Deferral Area (~2,082 sq.ft.)

East Excavation 1' bgs (~1,101 sq.ft.)

North Excavation 1' bgs (~172 sq.ft.)

South Excavation 1' bgs (~200 sq.ft.)

Total Area of Excavation Base: ~1,636 sq.ft.
Total Area of Excavation Walls: ~388 sq.ft.

VERTEX

0 5 10 20 ft

NAD 1983 UTM Zone 13N

Date: Jul 24/24

Map Center:
Lat/Long
32.362659°,-103.837326°

N

Confirmation Sampling Schematic
James Ranch Unit DI 2 CTB

FIGURE:
2

XTO ENERGY

Geospatial data presented in this figure may be derived from external sources and Vertex does not assume any liability for inaccuracies. This figure is intended for reference use only and is not certified for legal, survey, or engineering purposes.

Note: Georeferenced image from Esri, 2023. Approximate site boundary from sketch by Vertex Professional Services Ltd. (Vertex), 2024. Site features from GPS, Vertex, 2024.

VERSATILITY. EXPERTISE.

Document Path: G:\1-Projects_US PROJECTS\XTO Energy\23E-06065 - JRU DI 2\Project\23E-06065.aprx

TABLES

Client Name: XTO Energy, Inc.
Site Name: James Ranch Unit DI 2 CTB
NMOCD Tracking #: nAPP2332135027
Project #: 23E-06065-01
Lab Reports: 890-6102-1, 890-6103-1, 890-6109-1, 885-3745-1, and 885-7006-1

Table 3. Initial Characterization Sample Field Screen and Laboratory Results - Depth to Groundwater <50 feet bgs

Sample Description			Laboratory Results						
			Volatile		Extractable				
Sample ID	Depth (ft)	Sample Date	Benzene (mg/kg)	BTEX (Total) (mg/kg)	Gasoline Range Organics (GRO) (mg/kg)	Diesel Range Organics (DRO) (mg/kg)	Motor Oil Range Organics (MRO) (mg/kg)	Total Petroleum Hydrocarbons (TPH) (mg/kg)	Chloride Concentration (mg/kg)
BH24-01	0	January 31, 2024	ND	2.75	1,430	4,390	175	**6,000**	260
	2	January 31, 2024	ND	ND	ND	90.4	ND	90.4	245
	3	January 31, 2024	ND	ND	ND	ND	ND	ND	293
BH24-02	0	January 31, 2024	ND	ND	ND	ND	ND	ND	89.5
	1	January 31, 2024	ND	ND	ND	ND	ND	ND	134
	2	January 31, 2024	ND	ND	ND	ND	ND	ND	126
BH24-03	0	January 31, 2024	ND	ND	ND	ND	ND	ND	54.2
	1	January 31, 2024	ND	ND	ND	ND	ND	ND	101
	2	January 31, 2024	ND	ND	ND	ND	ND	ND	57.1
BH24-04	0	February 1, 2024	ND	0.0379	67.3	1,340	52	**1,460**	162
	1R	February 1, 2024	ND	ND	ND	170	ND	**170**	114
BH24-05	0	February 1, 2024	ND	15.8	790	3,330	141	**4,260**	131
	1	February 1, 2024	ND	17.3	832	2,680	115	**3,630**	107
	2	February 1, 2024	ND	0.00538	ND	460	ND	**460**	84
BH24-06	0	February 1, 2024	ND	ND	ND	76	ND	76	50.6
	1	February 1, 2024	ND	ND	ND	73.3	ND	73.3	54
	2	February 1, 2024	ND	ND	ND	87.2	ND	87.2	114
BH24-07	0	February 1, 2024	ND	ND	ND	161	ND	**161**	107
	1	February 1, 2024	ND	ND	ND	60.7	ND	60.7	110
BH24-08	0	February 2, 2024	ND	2.74	948	4750	203	**5,900**	118
	1	February 2, 2024	ND	0.0108	65.3	584	ND	**649.3**	180
BH24-09	0	February 2, 2024	ND	ND	ND	99.6	ND	99.6	88.8
	1	February 2, 2024	ND	ND	ND	64.1	ND	64.1	88.2
	2	February 2, 2024	ND	ND	ND	68.5	ND	68.5	105

Client Name: XTO Energy, Inc.
Site Name: James Ranch Unit DI 2 CTB
NMOCD Tracking #: nAPP2332135027
Project #: 23E-06065-01
Lab Reports: 890-6102-1, 890-6103-1, 890-6109-1, 885-3745-1, and 885-7006-1

Table 3. Initial Characterization Sample Field Screen and Laboratory Results - Depth to Groundwater <50 feet bgs

Sample Description			Laboratory Results						
			Volatile		Extractable				
Sample ID	Depth (ft)	Sample Date	Benzene (mg/kg)	BTEX (Total) (mg/kg)	Gasoline Range Organics (GRO) (mg/kg)	Diesel Range Organics (DRO) (mg/kg)	Motor Oil Range Organics (MRO) (mg/kg)	Total Petroleum Hydrocarbons (TPH) (mg/kg)	Chloride Concentration (mg/kg)
BH24-10	0	February 2, 2024	ND	ND	ND	ND	ND	ND	138
	1	February 2, 2024	ND	ND	ND	ND	ND	ND	104
BH24-11	0	February 2, 2024	ND	ND	ND	ND	ND	ND	465
	1	February 2, 2024	ND	ND	ND	ND	ND	ND	198
	2	February 2, 2024	ND	ND	ND	ND	ND	ND	148
BH24-26	0	April 30, 2024	ND	4.97	68	11,000	4,300	**15,368**	42
	2	April 30, 2024	ND	ND	ND	280	110	**390**	64
	3	April 30, 2024	ND	ND	ND	57	ND	57	53
BH24-27	0	June 25, 2024	ND	ND	ND	ND	ND	ND	ND
	1	June 25, 2024	ND	ND	ND	ND	ND	ND	73

"R" indicates Refusal
"ND" Not Detected at the Reporting Limit
"-" indicates not analyzed/assessed
Bold and grey shaded indicates exceedance outside of NMOCD Remediation Closure Criteria

Client Name: XTO Energy, Inc.
Site Name: James Ranch Unit DI 2 CTB
NMOCD Tracking #: nAPP2332135027
Project #: 23E-06065-01
Lab Reports: 890-6102-1, 890-6103-1, 890-6109-1, 885-3745-1, and 885-7006-1

Table 3. Initial Characterization Sample Field Screen and Laboratory Results - Depth to Groundwater <50 feet bgs

Sample Description			Laboratory Results						
			Volatile		Extractable				
Sample ID	Depth (ft)	Sample Date	Benzene (mg/kg)	BTEX (Total) (mg/kg)	Gasoline Range Organics (GRO) (mg/kg)	Diesel Range Organics (DRO) (mg/kg)	Motor Oil Range Organics (MRO) (mg/kg)	Total Petroleum Hydrocarbons (TPH) (mg/kg)	Chloride Concentration (mg/kg)
BH24-10	0	February 2, 2024	ND	ND	ND	ND	ND	ND	138
	1	February 2, 2024	ND	ND	ND	ND	ND	ND	104
BH24-11	0	February 2, 2024	ND	ND	ND	ND	ND	ND	465
	1	February 2, 2024	ND	ND	ND	ND	ND	ND	198
	2	February 2, 2024	ND	ND	ND	ND	ND	ND	148
BH24-26	0	April 30, 2024	ND	4.97	68	11,000	4,300	**15,368**	42
	2	April 30, 2024	ND	ND	ND	280	110	**390**	64
	3	April 30, 2024	ND	ND	ND	57	ND	57	53
BH24-27	0	June 25, 2024	ND	ND	ND	ND	ND	ND	ND
	1	June 25, 2024	ND	ND	ND	ND	ND	ND	73

"ND" Not Detected at the Reporting Limit
"-" indicates not analyzed/assessed
Bold and grey shaded indicates exceedance outside of NMOCD Remediation Closure Criteria

Client Name: XTO Energy, Inc.
Site Name: James Ranch Unit DI 2 CTB
NMOCD Tracking #: nAPP2332135027
Project #: 23E-06065-01
Lab Report: 885-3693-1

Table 4. Confirmatory Sample Field Screen and Laboratory Results <50 feet bgs

Sample Description			Petroleum Hydrocarbons						Inorganic
			Volatile		Extractable				
Sample ID	Depth (ft)	Sample Date	Benzene (mg/kg)	BTEX (Total) (mg/kg)	Gasoline Range Organics (GRO) (mg/kg)	Diesel Range Organics (DRO) (mg/kg)	Motor Oil Range Organics (MRO) (mg/kg)	Total Petroleum Hydrocarbons (TPH) (mg/kg)	Chloride Concentration (mg/kg)
BES24-01	1	April 29, 2024	ND	5.19	81	22,000	8,000	**30,081**	110
BH24-09*	2	February 2, 2024	ND	ND	ND	68.5	ND	68.5	105
BES24-02	1	April 29, 2024	ND	0.685	15	8,500	4,700	**13,215**	280
BH24-01*	3	January 31, 2024	ND	ND	ND	ND	ND	ND	293
BES24-03	1	April 29, 2024	ND	7.51	91	5,100	1,600	**6,791**	230
BH24-01*	3	January 31, 2024	ND	ND	ND	ND	ND	ND	293
BES24-04	1	April 29, 2024	ND	ND	ND	ND	ND	ND	36
BES24-05	1	April 29, 2024	ND	ND	ND	ND	ND	ND	41
BES24-06	1	April 29, 2024	ND	ND	ND	ND	ND	ND	29
BES24-07	1	April 29, 2024	ND	ND	ND	ND	ND	ND	60
BES24-08	1	April 29, 2024	ND	ND	ND	ND	ND	ND	22
BES24-09	1	April 29, 2024	ND	ND	ND	ND	ND	ND	30
WES24-01	0-1	April 29, 2024	0.072	16.072	200	35,000	14,000	**49,200**	74
BH24-27*	1	June 25, 2024	ND	ND	ND	ND	ND	ND	73
WES24-02	0-1	April 29, 2024	0.18	7.98	270	27,000	12,000	**39,270**	190
BH24-27*	1	June 25, 2024	ND	ND	ND	ND	ND	ND	73
WES24-03	0-1	April 29, 2024	ND	1.441	21	2,000	810	**2,831**	120
BH24-27*	1	June 25, 2024	ND	ND	ND	ND	ND	ND	73
WES24-04	0-1	April 29, 2024	ND	ND	ND	ND	ND	ND	99
WES24-05	0-1	April 29, 2024	ND	ND	ND	ND	ND	ND	19
WES24-06	0-1	April 29, 2024	ND	ND	ND	ND	ND	ND	90
WES24-07	0-1	April 29, 2024	ND	64.1	990	8,400	2,500	**11,890**	130
WES24-08*	0-1	April 29, 2024	ND	ND	ND	ND	ND	ND	43
WES24-08	0-1	April 29, 2024	ND	ND	ND	ND	ND	ND	43
WES24-09	0-1	April 29, 2024	ND	ND	7.5	430	150	**587.5**	160
WES24-05*	0-1	April 29, 2024	ND	ND	ND	ND	ND	ND	19

"ND" Not Detected at the Reporting Limit
"-" indicates not analyzed/assessed
Bold and grey shaded indicates exceedance outside of NMOCD Remediation Closure Criteria
* Indicates Horizontal/Vertical Delineation

VERTEX

APPENDIX A - NMOCD C-141 Report

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	nAPP2332135027
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party XTO Energy	OGRID 5380
Contact Name Garrett Green	Contact Telephone 575-200-0729
Contact email garrett.green@exxonmobil.com	Incident # *(assigned by OCD)*
Contact mailing address 3104 E. Greene Street, Carlsbad, New Mexico, 88220	

Location of Release Source

Latitude 32.36265 Longitude -103.83733
(NAD 83 in decimal degrees to 5 decimal places)

Site Name James Ranch Unit DI 2 CTB	Site Type Tank Battery
Date Release Discovered 11/13/2023	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
K	25	22S	30E	Eddy

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

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls) 10.61	Volume Recovered (bbls) 8.00
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of total dissolved solids (TDS) 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: A nipple and gauge failed on the LACT causing a release of 10.67 barrels of oil to containment and pad. A total of 8 barrels of oil was recovered from containment and pad. A third-party contractor has been retained for remediation activities.

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2332135027
District RP	
Facility ID	
Application ID	

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

Initial Response

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

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

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

NA

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: Garrett Green Title: Environmental Coordinator

Signature:  Date: 11/16/2023

email: garrett.green@exxonmobil.com Telephone: 575-200-0729

OCD Only

Received by: Shelly Wells Date: 11/17/2023

Location:	James Ranch Unit DI 2 Tank Battery	
Spill Date:	11/13/2023	
Area 1		
Approximate Area =	33.68	cu.ft.
VOLUME OF LEAK		
Total Crude Oil =	6.00	bbls
Total Produced Water =	0.00	bbls
Area 2		
Approximate Area =	937.00	sq. ft.
Average Saturation (or depth) of spill =	1.25	inches

Average Porosity Factor =	0.15	

VOLUME OF LEAK		
Total Crude Oil =	4.61	bbls
Total Produced Water =	0.00	bbls

TOTAL VOLUME OF LEAK		
Total Crude Oil =	**10.61**	**bbls**
Total Produced Water =	**0.00**	**bbls**
TOTAL VOLUME RECOVERED		
Total Crude Oil =	**8.00**	**bbls**
Total Produced Water =	**0.00**	**bbls**

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: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 286726
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
scwells	None	11/17/2023

APPENDIX B – Closure Criteria Research Documentation

APPENDIX C – Daily Field Reports

Daily Site Visit Report

Client:	XTO Energy Inc. (US)	Inspection Date:	2/1/2024
Site Location Name:	JRU DI 2	Report Run Date:	2/2/2024 3:15 PM
Client Contact Name:	Garrett Green	API #:	
Client Contact Phone #:	575-200-0729		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	2/1/2024 8:11 AM
Departed Site	2/1/2024 3:20 PM

Field Notes

14:28 Completed safety paperwork and BH pin finder check upon arrival, as well as texted Garrett Green before start working.

14:45 Obtained BH24-04 and 07 at 0 and 1'; BH24-05 and 06 at 0, 1, and 2'. All samples were field screened for Cl and TPH. Cl are between 500 and 100 ppm for all samples.

TPH is above 2000 ppm for BH04 at 0' and for BH05 at 0 and 1' while at 2' BH05 has 450 ppm. For the remaining samples TPH is below 32 ppm.

14:30 All samples were jarred and sent to the lab

14:46 Marked on collector the visible stain around the release area.

Next Steps & Recommendations

1

Daily Site Visit Report

Site Photos

Viewing Direction: Southwest

BH24-04 at 1 ft. Collected at 0 and 1’. Refused at 1’

Viewing Direction: Southwest

BH24-05 at 2 ft. Collected at 0, 1 and 2’. Refused at 2’

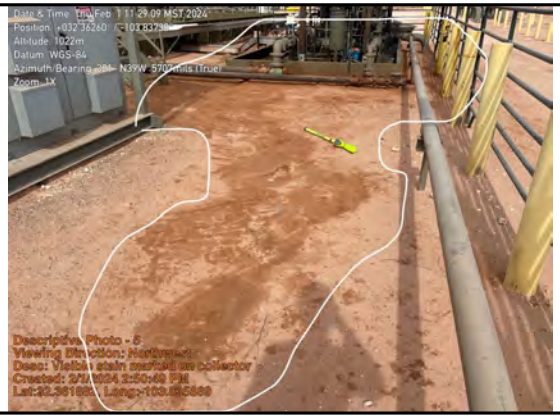
Viewing Direction: Southeast

BH24-06 at 2 ft. Collected at 0, 1 and 2’. Refused at 2’

Viewing Direction: Northeast

BH24-07 at 1 ft. Collected at 0 and 1’. Refused at 1’

Daily Site Visit Report

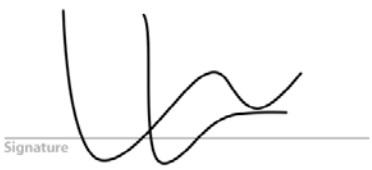
Viewing Direction: Northwest

Visible stain marked on collector

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Deusavan Costa Filho

Signature:



Daily Site Visit Report

Client:	XTO Energy Inc. (US)	Inspection Date:	4/19/2024
Site Location Name:	JRU DI 2	Report Run Date:	4/19/2024 10:52 PM
Client Contact Name:	Amy Ruth	API #:	
Client Contact Phone #:	432-661-0571		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	4/19/2024 7:15 AM
Departed Site	

Field Notes

8:04 On site held safety meeting and walked through the scope of work. Called Wes with XTO obtained work authorization.

8:05 Phase 2: Retested BES24-03,14,19 with titration for Cl. All samples came back above criteria. So I marked out the areas that were above criteria yesterday to excavate a further 6inches bgs.

8:07 Phase 1: Standard Safety work crew continued hand excavation between equipment on east release.

8:10 Added Angie as the permit holder the JRU DI 2

10:06 Phase 2: BES24-21 through 27 were all field screened via EC and TPH and were all below criteria. BES24-21,23 were tested both EC and titration. All of these samples have been jarred on site. Began collector BES24-28-31

9:54 Phase 2: The originally 1ft excavation with the PHASE2 release has been mapped out with the GNSS collector

14:23 Phase 2: BES24-31 was high on TPH at 247 area of sample will need to be hand dug another .5 ft bgs down

Next Steps & Recommendations

1

Daily Site Visit Report

Viewing Direction: North	**Viewing Direction**: South
	
Phase 2: Excavation of the north side of the SW release was further excavated to 1.5 ft bgs. Samples BES24-02,03 were sample and were below criteria and jarred	Phase 2: Excavation of the north side of the SW release was further excavated to 1.5 ft bgs. Samples BES24-02,03 were sample and were below criteria and jarred
Viewing Direction: West	**Viewing Direction**: East
	
Phase 2: Eastern portion of PHASE2 release has been successfully excavated to 1ft bgs	PHASE1 East release southern most excavation area excavated to 1ft bgs

Daily Site Visit Report

Viewing Direction: North

PHASE1 East release southern most excavation area

Viewing Direction: North

PHASE1 center excavtion area

Viewing Direction: Northwest

PHASE1 northern most excavtion area

Viewing Direction: North

PHASE1 center and northern most excavtion areas

Daily Site Visit Report

Viewing Direction: Southeast	**Viewing Direction**: West
	
PHASE 1 southern most release area	BH24-26 is need and its location is in PHASE1 southern most excavation area circled here

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Wyatt Wadleigh

Signature:

Daily Site Visit Report

Client	XTO Energy Inc. (US)	Inspection Date	4/22/2024
Site Location Name	JRU DI 2	API #	
Client Contact Name	Amy Ruth	Project Owner	
Client Contact Phone #	432-661-0571	Project Manager	
Project Reference #			
Unique Project ID			

Summary of Times

Arrived at Site	4/22/2024 7:55 AM
Departed Site	4/22/2024 2:25 PM

Field Notes

10:36 Arrived on site and filled out paperwork. Made contact with Wes Boyd for work authorization. Walked through site with the Standard crew and discussed the work to be done for the day.

10:38 Crew began hand digging on the eastern excavation (Phase 1) while others continued to finish up the hand digging on the eastern portion of the southern excavation (Phase 2).

11:41 Phase 2: Finished up the western part of the excavation that required the loader

11:40 Phase 2: Collected samples BH24-31, -12 through -16, & -19.

12:55 Phase 2: Samples 31 and 14 were high on chlorides. 717 and 949, respectively.

14:08 Phase 2: All other samples tested within criteria on chlorides. Those will be jarred up to send to lab.

Next Steps & Recommendations

1 Phase 2: Resample BES24-14 & -31. Borehole 6 needs to be dug.

Daily Site Visit Report

Site Photos

Viewing Direction: Southwest

Phase 1: Midpoint of Eastern excavation looking southwest

Viewing Direction: West

Phase 1: Eastern excavation looking west

Viewing Direction: South

Phase 1: Eastern excavation looking south

Viewing Direction: North

Phase 2: End of sw excavation

Daily Site Visit Report

Viewing Direction: South	**Viewing Direction**: North
	
Phase 2: End of southwest excavation	Phase 2: Far southwest corner of excavation
Viewing Direction: North	**Viewing Direction**: South
	
Phase 2: Far west side of excavation	Phase 2: Far west side of excavation

Daily Site Visit Report

Viewing Direction: Southeast

Phase 2: Southwest corner of excavation

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Angela Mohle

Signature: 
Signature

Daily Site Visit Report

Client:	XTO Energy Inc. (US)	Inspection Date:	4/29/2024
Site Location Name:	JRU DI 2	Report Run Date:	4/29/2024 11:55 PM
Client Contact Name:	Amy Ruth	API #:	
Client Contact Phone #:	432-661-0571		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	4/29/2024 8:00 AM
Departed Site	

Field Notes

8:43 On site held safety meeting, gained authorization from Wes Byrd to begin work.

8:45 Began making underground lines the eastern (PHASE1) excavation for the road.

10:44 Began excavtion of the road to 1ft bgs as marked on collector. While that was going on I was field sampling points from phase 1&2 that were eligible to be collected.

10:46 PHASE1: collected samples from in between the pipes and equipment that was hand dug. All samples were above criteria on TPH. PHASE2: BES24-31 was collected at 2ft bgs and was over 300 on TPH will need to be further excavated.

16:38 Excavtion of the road in PhASE1 is complete all samples from excavations BES24-01through 9 are jarred. BES24-04-09 are below criteria while BES24-01-03 are being deferred.

16:38 Wall samples from road excavtion area WES24-04-09 are below criteria and were jarred on site.

Next Steps & Recommendations

1

Daily Site Visit Report

Site Photos

Viewing Direction: North

PHASE1: road excavtion north side is complete and field screens were below criteria.

Viewing Direction: North

PHASE1 excavation of road to 1 ft bgs

Viewing Direction: North

PHASE1 facing north excavtion complete

Viewing Direction: South

PHASE 1 road excavtion facing south

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Wyatt Wadleigh

Signature:

APPENDIX D – Notifications

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: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 330427
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAPP2332135027**
Incident Name	**NAPP2332135027 JAMES RANCH UNIT DI 2 CTB @ 0**
Incident Type	**Oil Release**
Incident Status	**Initial C-141 Approved**

Location of Release Source	
Site Name	**JAMES RANCH UNIT DI 2 CTB**
Date Release Discovered	**11/13/2023**
Surface Owner	**Federal**

Sampling Event General Information *Please answer all the questions in this group.*	
What is the sampling surface area in square feet	2,000
What is the estimated number of samples that will be gathered	10
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	04/10/2024
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	SCarttar@vertex.ca
Please provide any information necessary for navigation to sampling site	K-25-22S-30E 32.36265,-103.83733

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: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 330427
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
aromero	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.	4/5/2024

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: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 330429
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAPP2332135027**
Incident Name	**NAPP2332135027 JAMES RANCH UNIT DI 2 CTB @ 0**
Incident Type	**Oil Release**
Incident Status	**Initial C-141 Approved**

Location of Release Source	
Site Name	**JAMES RANCH UNIT DI 2 CTB**
Date Release Discovered	**11/13/2023**
Surface Owner	**Federal**

Sampling Event General Information *Please answer all the questions in this group.*	
What is the sampling surface area in square feet	2,000
What is the estimated number of samples that will be gathered	10
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	04/11/2024
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	SCarttar@vertex.ca
Please provide any information necessary for navigation to sampling site	K-25-22S-30E 32.36265,-103.83733

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: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 330429
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
aromero	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.	4/5/2024

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

QUESTIONS

Action 330432

QUESTIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 330432
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAPP2332135027**
Incident Name	**NAPP2332135027 JAMES RANCH UNIT DI 2 CTB @ 0**
Incident Type	**Oil Release**
Incident Status	**Initial C-141 Approved**

Location of Release Source	
Site Name	**JAMES RANCH UNIT DI 2 CTB**
Date Release Discovered	**11/13/2023**
Surface Owner	**Federal**

Sampling Event General Information *Please answer all the questions in this group.*	
What is the sampling surface area in square feet	2,000
What is the estimated number of samples that will be gathered	10
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	04/12/2024
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	SCarttar@vertex.ca
Please provide any information necessary for navigation to sampling site	K-25-22S-30E 32.36265,-103.83733

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: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 330432
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
aromero	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.	4/5/2024

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

QUESTIONS

Action 330432

QUESTIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 330432
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAPP2332135027**
Incident Name	**NAPP2332135027 JAMES RANCH UNIT DI 2 CTB @ 0**
Incident Type	**Oil Release**
Incident Status	**Initial C-141 Approved**

Location of Release Source	
Site Name	**JAMES RANCH UNIT DI 2 CTB**
Date Release Discovered	**11/13/2023**
Surface Owner	**Federal**

Sampling Event General Information *Please answer all the questions in this group.*	
What is the sampling surface area in square feet	2,000
What is the estimated number of samples that will be gathered	10
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	04/12/2024
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	SCarttar@vertex.ca
Please provide any information necessary for navigation to sampling site	K-25-22S-30E 32.36265,-103.83733

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: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 330432
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
aromero	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.	4/5/2024

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: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 333169
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAPP2332135027**
Incident Name	**NAPP2332135027 JAMES RANCH UNIT DI 2 CTB @ 0**
Incident Type	**Oil Release**
Incident Status	**Initial C-141 Approved**

Location of Release Source	
Site Name	**JAMES RANCH UNIT DI 2 CTB**
Date Release Discovered	**11/13/2023**
Surface Owner	**Federal**

Sampling Event General Information *Please answer all the questions in this group.*	
What is the sampling surface area in square feet	2,000
What is the estimated number of samples that will be gathered	10
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	04/18/2024
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	SCarttar@vertex.ca
Please provide any information necessary for navigation to sampling site	K-25-22S-30E 32.36265,-103.83733

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: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 333169
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
aromero	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.	4/15/2024

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: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 333172
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAPP2332135027**
Incident Name	**NAPP2332135027 JAMES RANCH UNIT DI 2 CTB @ 0**
Incident Type	**Oil Release**
Incident Status	**Initial C-141 Approved**

Location of Release Source	
Site Name	**JAMES RANCH UNIT DI 2 CTB**
Date Release Discovered	**11/13/2023**
Surface Owner	**Federal**

Sampling Event General Information *Please answer all the questions in this group.*	
What is the sampling surface area in square feet	2,000
What is the estimated number of samples that will be gathered	10
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	04/19/2024
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	SCarttar@vertex.ca
Please provide any information necessary for navigation to sampling site	K-25-22S-30E 32.36265,-103.83733

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: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 333172
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
aromero	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.	4/15/2024

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: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 334899
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAPP2332135027**
Incident Name	**NAPP2332135027 JAMES RANCH UNIT DI 2 CTB @ 0**
Incident Type	**Oil Release**
Incident Status	**Initial C-141 Approved**

Location of Release Source	
Site Name	**JAMES RANCH UNIT DI 2 CTB**
Date Release Discovered	**11/13/2023**
Surface Owner	**Federal**

Sampling Event General Information *Please answer all the questions in this group.*	
What is the sampling surface area in square feet	2,000
What is the estimated number of samples that will be gathered	10
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	04/22/2024
Time sampling will commence	09:00 AM
Please provide any information necessary for observers to contact samplers	SCarttar@vertex.ca
Please provide any information necessary for navigation to sampling site	K-25-22S-30E 32.36265,-103.83733

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: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 334899
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
aromero	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.	4/18/2024

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: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 337762
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAPP2332135027**
Incident Name	**NAPP2332135027 JAMES RANCH UNIT DI 2 CTB @ 0**
Incident Type	**Oil Release**
Incident Status	**Initial C-141 Approved**

Location of Release Source	
Site Name	**JAMES RANCH UNIT DI 2 CTB**
Date Release Discovered	**11/13/2023**
Surface Owner	**Federal**

Sampling Event General Information *Please answer all the questions in this group.*	
What is the sampling surface area in square feet	2,000
What is the estimated number of samples that will be gathered	10
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	04/29/2024
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	SCarttar@vertex.ca
Please provide any information necessary for navigation to sampling site	K-25-22S-30E 32.36265,-103.83733

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: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 337762
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
aromero	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.	4/25/2024

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

QUESTIONS

Action 337765

QUESTIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 337765
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAPP2332135027**
Incident Name	**NAPP2332135027 JAMES RANCH UNIT DI 2 CTB @ 0**
Incident Type	**Oil Release**
Incident Status	**Initial C-141 Approved**

Location of Release Source	
Site Name	**JAMES RANCH UNIT DI 2 CTB**
Date Release Discovered	**11/13/2023**
Surface Owner	**Federal**

Sampling Event General Information *Please answer all the questions in this group.*	
What is the sampling surface area in square feet	2,000
What is the estimated number of samples that will be gathered	10
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	04/30/2024
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	SCarttar@vertex.ca
Please provide any information necessary for navigation to sampling site	K-25-22S-30E 32.36265,-103.83733

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: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 337765
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
aromero	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.	4/25/2024

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: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 337767
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAPP2332135027**
Incident Name	**NAPP2332135027 JAMES RANCH UNIT DI 2 CTB @ 0**
Incident Type	**Oil Release**
Incident Status	**Initial C-141 Approved**

Location of Release Source	
Site Name	**JAMES RANCH UNIT DI 2 CTB**
Date Release Discovered	**11/13/2023**
Surface Owner	**Federal**

Sampling Event General Information *Please answer all the questions in this group.*	
What is the sampling surface area in square feet	2,000
What is the estimated number of samples that will be gathered	10
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	05/01/2024
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	SCarttar@vertex.ca
Please provide any information necessary for navigation to sampling site	K-25-22S-30E 32.36265,-103.83733

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: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 337767
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
aromero	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.	4/25/2024

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

QUESTIONS

Action 337769

QUESTIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 337769
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAPP2332135027**
Incident Name	**NAPP2332135027 JAMES RANCH UNIT DI 2 CTB @ 0**
Incident Type	**Oil Release**
Incident Status	**Initial C-141 Approved**

Location of Release Source	
Site Name	**JAMES RANCH UNIT DI 2 CTB**
Date Release Discovered	**11/13/2023**
Surface Owner	**Federal**

Sampling Event General Information *Please answer all the questions in this group.*	
What is the sampling surface area in square feet	2,000
What is the estimated number of samples that will be gathered	10
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	05/02/2024
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	SCarttar@vertex.ca
Please provide any information necessary for navigation to sampling site	K-25-22S-30E 32.36265,-103.83733

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: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 337769
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
aromero	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.	4/25/2024

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

QUESTIONS

Action 337770

QUESTIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 337770
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAPP2332135027**
Incident Name	**NAPP2332135027 JAMES RANCH UNIT DI 2 CTB @ 0**
Incident Type	**Oil Release**
Incident Status	**Initial C-141 Approved**

Location of Release Source	
Site Name	**JAMES RANCH UNIT DI 2 CTB**
Date Release Discovered	**11/13/2023**
Surface Owner	**Federal**

Sampling Event General Information *Please answer all the questions in this group.*	
What is the sampling surface area in square feet	2,000
What is the estimated number of samples that will be gathered	10
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	05/03/2024
Time sampling will commence	08:00 AM
Please provide any information necessary for observers to contact samplers	SCarttar@vertex.ca
Please provide any information necessary for navigation to sampling site	K-25-22S-30E 32.36265,-103.83733

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: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 337770
	Action Type: [NOTIFY] Notification Of Sampling (C-141N)

CONDITIONS

Created By	Condition	Condition Date
aromero	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.	4/25/2024

Collins, Melanie

From: OCDOnline@state.nm.us
Sent: Friday, November 17, 2023 10:44 AM
To: Collins, Melanie
Subject: The Oil Conservation Division (OCD) has accepted the application, Application ID: 286719

To whom it may concern (c/o Melanie Collins for XTO ENERGY, INC),

The OCD has accepted the submitted *Notification of a release* (NOR), for incident ID (n#) nAPP2332135027, with the following conditions:

- **When submitting future reports regarding this release, please submit the calculations used or specific justification for the volumes reported on the initial C-141.**

Please reference nAPP2332135027, on all subsequent C-141 submissions and communications regarding the remediation of this release.
NOTE: As of December 2019, NMOCD has discontinued the use of the "RP" number.
If you have any questions regarding this application, or don't know why you have received this email, please contact us.

ocd.enviro@state.nm.us

New Mexico Energy, Minerals and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, NM 87505

From: Hamlet, Robert, EMNRD
To: Green, Garrett J
Cc: Chance Dixon; Sally Carttar; Bratcher, Michael, EMNRD; Wells, Shelly, EMNRD; Velez, Nelson, EMNRD
Subject: XTO - JRU DI 2 (nAPP2332135027) Extension Request
Date: Wednesday, February 7, 2024 2:58:21 PM

RE: Incident #NAPP2332135027

Garrett,

Your request for a 90-day extension to May 7th, 2024, is approved. Please include this e-mail correspondence in the remediation and/or closure report.

Robert Hamlet ● Environmental Specialist - Advanced
Environmental Bureau
EMNRD - Oil Conservation Division
506 W. Texas Ave.| Artesia, NM 88210
575.909.0302 | robert.hamlet@state.nm.us
http://www.emnrd.state.nm.us/OCD/

From: Wells, Shelly, EMNRD <Shelly.Wells@emnrd.nm.gov>
Sent: Wednesday, February 7, 2024 2:29 PM
To: Hamlet, Robert, EMNRD <Robert.Hamlet@emnrd.nm.gov>
Cc: Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>
Subject: FW: [EXTERNAL] XTO - JRU DI 2 (nAPP2332135027) Extension Request

From: Green, Garrett J <garrett.green@exxonmobil.com>
Sent: Wednesday, February 7, 2024 2:12 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Chance Dixon <cdixon@vertex.ca>; Sally Carttar <SCarttar@vertex.ca>
Subject: [EXTERNAL] XTO - JRU DI 2 (nAPP23332135027) Extension Request

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

All,

XTO is requesting an extension for the current deadline of February 12, 2024, 2024, to complete

remedial activities and submitting a report required in 19.15.29.12.B.(1) NMAC at the JRU DI 2 CTB (nAPP23332135027). In order to complete all remedial activities and submit a report, XTO requests an extension until May 12, 2024.

Thanks,

Garrett Green
Environmental Advisor
Delaware Business Unit
(575) 200-0729
Garrett.Green@ExxonMobil.com

XTO Energy, Inc.
3104 E. Greene Street | Carlsbad, NM 88220 | M: (575)200-0729

(Final Extension) - XTO - JRU DI 2 CTB - nAPP23332135027

Hamlet, Robert, EMNRD <Robert.Hamlet@emnrd.nm.gov>
Fri 4/26/2024 10:09 AM

To:Sally Carttar <SCarttar@vertex.ca>
Cc:alan.romero1@exxonmobil.com <alan.romero1@exxonmobil.com>;amy.ruth@exxonmobil.com <amy.ruth@exxonmobil.com>;amanda.garcia@exxonmobil.com <amanda.garcia@exxonmobil.com>;Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>;Wells, Shelly, EMNRD <Shelly.Wells@emnrd.nm.gov>;Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>

RE: Incident **#NAPP2332135027**

Sally,

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: Wells, Shelly, EMNRD <Shelly.Wells@emnrd.nm.gov>
Sent: Thursday, April 25, 2024 4:42 PM
To: Hamlet, Robert, EMNRD <Robert.Hamlet@emnrd.nm.gov>
Cc: Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>
Subject: FW: [EXTERNAL] XTO Extension Request - JRU DI 2 CTB - nAPP23332135027

From: Sally Carttar <SCarttar@vertex.ca>
Sent: Thursday, April 25, 2024 4:28 PM
To: Wells, Shelly, EMNRD <Shelly.Wells@emnrd.nm.gov>; Romero, Alan <alan.romero1@exxonmobil.com>
Cc: Ruth, Amy <amy.ruth@exxonmobil.com>; Garcia, Amanda <amanda.garcia@exxonmobil.com>
Subject: Re: [EXTERNAL] XTO Extension Request - JRU DI 2 CTB - nAPP23332135027

Hi all,

Sorry about that. The correct incident number for this release is nAPP2332135027.

Thanks!

From: Wells, Shelly, EMNRD <Shelly.Wells@emnrd.nm.gov>
Sent: Thursday, April 25, 2024 4:22 PM
To: Romero, Alan <alan.romero1@exxonmobil.com>
Cc: Ruth, Amy <amy.ruth@exxonmobil.com>; Garcia, Amanda <amanda.garcia@exxonmobil.com>; Sally Carttar <SCarttar@vertex.ca>
Subject: RE: [EXTERNAL] XTO Extension Request - JRU DI 2 CTB - nAPP23332135027

Hi Alan,

I do not know whom to forward this request to as the incident number does not exist.

Kind regards,

Shelly

Shelly Wells * Environmental Specialist-Advanced
Environmental Bureau
EMNRD-Oil Conservation Division
1220 S. St. Francis Drive|Santa Fe, NM 87505
(505)469-7520|Shelly.Wells@emnrd.nm.gov
http://www.emnrd.state.nm.us/OCD/

From: Romero, Alan <alan.romero1@exxonmobil.com>
Sent: Thursday, April 25, 2024 2:53 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Ruth, Amy <amy.ruth@exxonmobil.com>; Garcia, Amanda <amanda.garcia@exxonmobil.com>; Sally Carttar <SCarttar@vertex.ca>
Subject: [EXTERNAL] XTO Extension Request - JRU DI 2 CTB - nAPP23332135027

Good Afternoon,

XTO is requesting an extension for the current deadline of May 7, 2024, to complete remedial activities and submitting a report required in 19.15.29.12.B.(1) NMAC at the JRU DI 2 CTB (nAPP23332135027). Crews have been working on the equipment in the area surrounding the release and we have not been able to have consistent access to site thus delaying remediation work. In order to complete all remedial activities and submit a report, XTO requests an extension until August 5, 2024.

Respectfully,

Alan Romero
Environmental Advisor
Permian BU – New Mexico-Delaware
ExxonMobil Upstream Oil & Gas Unconventional
Direct: (575) 988-3383
alan.romero1@exxonmobil.com

XTO ENERGY, INC. – An ExxonMobil Subsidiary
3104 E. Greene Street | Carlsbad, New Mexico 88220

APPENDIX E – Laboratory Data Reports and Chain of Custody Forms

APPENDIX E – Laboratory Data Reports and Chain of Custody Forms

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Chance Dixon
Vertex
3101 Boyd Dr
Carlsbad, New Mexico 88220

Generated 2/14/2024 2:29:59 PM

JOB DESCRIPTION

JRU DI 2
23 E 06065

JOB NUMBER

890-6102-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

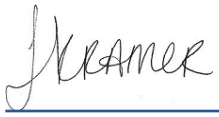
Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

Authorization



Generated
2/14/2024 2:29:59 PM

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

Client: Vertex
Project/Site: JRU DI 2

Laboratory Job ID: 890-6102-1
SDG: 23 E 06065

Table of Contents

Definitions/Glossary

Client: Vertex
Project/Site: JRU DI 2

Job ID: 890-6102-1
SDG: 23 E 06065

Qualifiers

GC VOA

Qualifier	Qualifier Description
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.

GC Semi VOA

Qualifier	Qualifier Description
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.

HPLC/IC

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

Glossary

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

Case Narrative

Client: Vertex
Project: JRU DI 2

Job ID: 890-6102-1

Job ID: 890-6102-1 Eurofins Carlsbad

Job Narrative
890-6102-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 2/1/2024 4:26 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.0°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: BH 24 - 01 0' (890-6102-1), BH 24 - 01 2' (890-6102-2), BH 24 - 01 3' (890-6102-3), BH 24 - 02 0' (890-6102-4), BH 24 - 02 1' (890-6102-5), BH 24 - 02 2' (890-6102-6), BH 24 - 03 0' (890-6102-7), BH 24 - 03 1' (890-6102-8) and BH 24 - 03 2' (890-6102-9).

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-72821 and analytical batch 880-72835 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-72820 and analytical batch 880-73011 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-73011 recovered under the lower control limit for Ethylbenzene, m-Xylene & p-Xylene and o-Xylene. The samples associated with this CCV were ran within 12 hours of passing CCV; therefore, the data have been reported.

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-72820 and analytical batch 880-73011 was outside the upper control limits.

Method 8021B: Surrogate recovery for the following sample was outside control limits: BH 24 - 01 0' (890-6102-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The following sample was diluted due to the nature of the sample matrix: BH 24 - 01 0' (890-6102-1). Elevated reporting limits (RLs) are provided.

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

GC Semi VOA
Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-72518 and analytical batch 880-72814 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: BH 24 - 01 3' (890-6102-3), BH 24 - 02 0' (890-6102-4), BH 24 - 02 1' (890-6102-5) and BH 24 - 02 2' (890-6102-6). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) precision for preparation batch 880-72518 and analytical batch 880-72814 was outside control limits. Sample non-homogeneity is suspected.

Case Narrative

Client: Vertex
Project: JRU DI 2

Job ID: 890-6102-1

Job ID: 890-6102-1 (Continued) Eurofins Carlsbad

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

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

Client Sample Results

Client: Vertex
Project/Site: JRU DI 2

Job ID: 890-6102-1
SDG: 23 E 06065

Client Sample ID: BH 24 - 01 0'

Lab Sample ID: 890-6102-1
Matrix: Solid
Date Collected: 01/31/24 10:00
Date Received: 02/01/24 16:26
Sample Depth: 0'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0398	U	0.0398		mg/Kg		02/11/24 13:28	02/14/24 09:13	20
Toluene	**0.435**		0.0398		mg/Kg		02/11/24 13:28	02/14/24 09:13	20
Ethylbenzene	**0.559**		0.0398		mg/Kg		02/11/24 13:28	02/14/24 09:13	20
m-Xylene & p-Xylene	**0.864**		0.0797		mg/Kg		02/11/24 13:28	02/14/24 09:13	20
o-Xylene	**0.890**		0.0398		mg/Kg		02/11/24 13:28	02/14/24 09:13	20
Xylenes, Total	**1.75**		0.0797		mg/Kg		02/11/24 13:28	02/14/24 09:13	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*216*	*S1+*	*70 - 130*	*02/11/24 13:28*	*02/14/24 09:13*	*20*
1,4-Difluorobenzene (Surr)	*75*		*70 - 130*	*02/11/24 13:28*	*02/14/24 09:13*	*20*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**2.75**		0.0797		mg/Kg			02/14/24 09:13	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**6000**		50.5		mg/Kg			02/11/24 14:24	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**1430**		50.5		mg/Kg		02/06/24 14:12	02/11/24 14:24	1
Diesel Range Organics (Over C10-C28)	**4390**		50.5		mg/Kg		02/06/24 14:12	02/11/24 14:24	1
Oil Range Organics (Over C28-C36)	**175**		50.5		mg/Kg		02/06/24 14:12	02/11/24 14:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*127*		*70 - 130*	*02/06/24 14:12*	*02/11/24 14:24*	*1*
o-Terphenyl	*82*		*70 - 130*	*02/06/24 14:12*	*02/11/24 14:24*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**260**		5.03		mg/Kg			02/06/24 15:15	1

Client Sample ID: BH 24 - 01 2'

Lab Sample ID: 890-6102-2
Matrix: Solid
Date Collected: 01/31/24 10:10
Date Received: 02/01/24 16:26
Sample Depth: 2'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		02/11/24 13:28	02/14/24 07:24	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/11/24 13:28	02/14/24 07:24	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/11/24 13:28	02/14/24 07:24	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		02/11/24 13:28	02/14/24 07:24	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/11/24 13:28	02/14/24 07:24	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		02/11/24 13:28	02/14/24 07:24	1

Client Sample Results

Client: Vertex
Project/Site: JRU DI 2

Job ID: 890-6102-1
SDG: 23 E 06065

Client Sample ID: BH 24 - 01 2'

Lab Sample ID: 890-6102-2
Matrix: Solid
Date Collected: 01/31/24 10:10
Date Received: 02/01/24 16:26
Sample Depth: 2'

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*	*02/11/24 13:28*	*02/14/24 07:24*	*1*
1,4-Difluorobenzene (Surr)	*122*		*70 - 130*	*02/11/24 13:28*	*02/14/24 07:24*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			02/14/24 07:24	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**90.4**		49.7	mg/Kg			02/11/24 15:08	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.7	U	49.7	mg/Kg		02/06/24 14:12	02/11/24 15:08	1
Diesel Range Organics (Over C10-C28)	**90.4**		49.7	mg/Kg		02/06/24 14:12	02/11/24 15:08	1
OII Range Organics (Over C28-C36)	<49.7	U	49.7	mg/Kg		02/06/24 14:12	02/11/24 15:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*82*		*70 - 130*	*02/06/24 14:12*	*02/11/24 15:08*	*1*
o-Terphenyl	*77*		*70 - 130*	*02/06/24 14:12*	*02/11/24 15:08*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**245**		4.97	mg/Kg			02/06/24 15:29	1

Client Sample ID: BH 24 - 01 3'

Lab Sample ID: 890-6102-3
Matrix: Solid
Date Collected: 01/31/24 10:20
Date Received: 02/01/24 16:26
Sample Depth: 3'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		02/11/24 13:28	02/14/24 07:45	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/11/24 13:28	02/14/24 07:45	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/11/24 13:28	02/14/24 07:45	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		02/11/24 13:28	02/14/24 07:45	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/11/24 13:28	02/14/24 07:45	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		02/11/24 13:28	02/14/24 07:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*	*02/11/24 13:28*	*02/14/24 07:45*	*1*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*	*02/11/24 13:28*	*02/14/24 07:45*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			02/14/24 07:45	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			02/11/24 15:31	1

Eurofins Carlsbad

Client Sample Results

Client: Vertex
Project/Site: JRU DI 2

Job ID: 890-6102-1
SDG: 23 E 06065

Client Sample ID: BH 24 - 01 3'

Lab Sample ID: 890-6102-3
Matrix: Solid
Date Collected: 01/31/24 10:20
Date Received: 02/01/24 16:26
Sample Depth: 3'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		02/06/24 14:12	02/11/24 15:31	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/06/24 14:12	02/11/24 15:31	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/06/24 14:12	02/11/24 15:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*31*	*S1-*	*70 - 130*	*02/06/24 14:12*	*02/11/24 15:31*	*1*
o-Terphenyl	*23*	*S1-*	*70 - 130*	*02/06/24 14:12*	*02/11/24 15:31*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**293**		5.01		mg/Kg			02/06/24 15:34	1

Client Sample ID: BH 24 - 02 0'

Lab Sample ID: 890-6102-4
Matrix: Solid
Date Collected: 01/31/24 10:30
Date Received: 02/01/24 16:26
Sample Depth: 0'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		02/11/24 13:28	02/14/24 08:05	1
Toluene	<0.00201	U	0.00201		mg/Kg		02/11/24 13:28	02/14/24 08:05	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		02/11/24 13:28	02/14/24 08:05	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		02/11/24 13:28	02/14/24 08:05	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		02/11/24 13:28	02/14/24 08:05	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		02/11/24 13:28	02/14/24 08:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*	*02/11/24 13:28*	*02/14/24 08:05*	*1*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*	*02/11/24 13:28*	*02/14/24 08:05*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			02/14/24 08:05	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.2	U	50.2		mg/Kg			02/11/24 15:54	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.2	U	50.2		mg/Kg		02/06/24 14:12	02/11/24 15:54	1
Diesel Range Organics (Over C10-C28)	<50.2	U	50.2		mg/Kg		02/06/24 14:12	02/11/24 15:54	1
OII Range Organics (Over C28-C36)	<50.2	U	50.2		mg/Kg		02/06/24 14:12	02/11/24 15:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*22*	*S1-*	*70 - 130*	*02/06/24 14:12*	*02/11/24 15:54*	*1*
o-Terphenyl	*12*	*S1-*	*70 - 130*	*02/06/24 14:12*	*02/11/24 15:54*	*1*

Client Sample Results

Client: Vertex
Project/Site: JRU DI 2

Job ID: 890-6102-1
SDG: 23 E 06065

Client Sample ID: BH 24 - 02 0'

Lab Sample ID: 890-6102-4
Matrix: Solid
Date Collected: 01/31/24 10:30
Date Received: 02/01/24 16:26
Sample Depth: 0'

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	89.5		4.96		mg/Kg			02/06/24 15:38	1

Client Sample ID: BH 24 - 02 1'

Lab Sample ID: 890-6102-5
Matrix: Solid
Date Collected: 01/31/24 10:40
Date Received: 02/01/24 16:26
Sample Depth: 1'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/11/24 13:28	02/14/24 08:25	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/11/24 13:28	02/14/24 08:25	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/11/24 13:28	02/14/24 08:25	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		02/11/24 13:28	02/14/24 08:25	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/11/24 13:28	02/14/24 08:25	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		02/11/24 13:28	02/14/24 08:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*	*02/11/24 13:28*	*02/14/24 08:25*	*1*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*	*02/11/24 13:28*	*02/14/24 08:25*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			02/14/24 08:25	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.4	U	50.4		mg/Kg			02/11/24 16:17	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.4	U	50.4		mg/Kg		02/06/24 14:12	02/11/24 16:17	1
Diesel Range Organics (Over C10-C28)	<50.4	U	50.4		mg/Kg		02/06/24 14:12	02/11/24 16:17	1
OII Range Organics (Over C28-C36)	<50.4	U	50.4		mg/Kg		02/06/24 14:12	02/11/24 16:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*5*	*S1-*	*70 - 130*	*02/06/24 14:12*	*02/11/24 16:17*	*1*
o-Terphenyl	*0.3*	*S1-*	*70 - 130*	*02/06/24 14:12*	*02/11/24 16:17*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	134		4.98		mg/Kg			02/06/24 15:43	1

Client Sample Results

Client: Vertex
Project/Site: JRU DI 2

Job ID: 890-6102-1
SDG: 23 E 06065

Client Sample ID: BH 24 - 02 2'

Lab Sample ID: 890-6102-6
Matrix: Solid
Date Collected: 01/31/24 10:50
Date Received: 02/01/24 16:26
Sample Depth: 2'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U F1	0.00200		mg/Kg		02/11/24 13:30	02/13/24 01:26	1
Toluene	<0.00200	U F1	0.00200		mg/Kg		02/11/24 13:30	02/13/24 01:26	1
Ethylbenzene	<0.00200	U F1	0.00200		mg/Kg		02/11/24 13:30	02/13/24 01:26	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		02/11/24 13:30	02/13/24 01:26	1
o-Xylene	<0.00200	U F1	0.00200		mg/Kg		02/11/24 13:30	02/13/24 01:26	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		02/11/24 13:30	02/13/24 01:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*70 - 130*	*02/11/24 13:30*	*02/13/24 01:26*	*1*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*	*02/11/24 13:30*	*02/13/24 01:26*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			02/13/24 01:26	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.3	U	50.3		mg/Kg			02/11/24 16:40	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.3	U	50.3		mg/Kg		02/06/24 14:12	02/11/24 16:40	1
Diesel Range Organics (Over C10-C28)	<50.3	U	50.3		mg/Kg		02/06/24 14:12	02/11/24 16:40	1
OII Range Organics (Over C28-C36)	<50.3	U	50.3		mg/Kg		02/06/24 14:12	02/11/24 16:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*21*	*S1-*	*70 - 130*	*02/06/24 14:12*	*02/11/24 16:40*	*1*
o-Terphenyl	*14*	*S1-*	*70 - 130*	*02/06/24 14:12*	*02/11/24 16:40*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**126**		5.03		mg/Kg			02/06/24 15:57	1

Client Sample ID: BH 24 - 03 0'

Lab Sample ID: 890-6102-7
Matrix: Solid
Date Collected: 01/31/24 11:00
Date Received: 02/01/24 16:26
Sample Depth: 0'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		02/11/24 13:30	02/13/24 01:46	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/11/24 13:30	02/13/24 01:46	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/11/24 13:30	02/13/24 01:46	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		02/11/24 13:30	02/13/24 01:46	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/11/24 13:30	02/13/24 01:46	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		02/11/24 13:30	02/13/24 01:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*02/11/24 13:30*	*02/13/24 01:46*	*1*

Client Sample Results

Client: Vertex
Project/Site: JRU DI 2

Job ID: 890-6102-1
SDG: 23 E 06065

Client Sample ID: BH 24 - 03 0'

Lab Sample ID: 890-6102-7
Matrix: Solid
Date Collected: 01/31/24 11:00
Date Received: 02/01/24 16:26
Sample Depth: 0'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*123*		*70 - 130*	*02/11/24 13:30*	*02/13/24 01:46*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			02/13/24 01:46	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.3	U	50.3	mg/Kg			02/11/24 17:02	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.3	U	50.3	mg/Kg		02/06/24 14:12	02/11/24 17:02	1
Diesel Range Organics (Over C10-C28)	<50.3	U	50.3	mg/Kg		02/06/24 14:12	02/11/24 17:02	1
OII Range Organics (Over C28-C36)	<50.3	U	50.3	mg/Kg		02/06/24 14:12	02/11/24 17:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*78*		*70 - 130*	*02/06/24 14:12*	*02/11/24 17:02*	*1*
o-Terphenyl	*81*		*70 - 130*	*02/06/24 14:12*	*02/11/24 17:02*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**54.2**		5.04	mg/Kg			02/06/24 16:02	1

Client Sample ID: BH 24 - 03 1'

Lab Sample ID: 890-6102-8
Matrix: Solid
Date Collected: 01/31/24 11:10
Date Received: 02/01/24 16:26
Sample Depth: 1'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		02/11/24 13:30	02/13/24 02:07	1
Toluene	<0.00199	U	0.00199	mg/Kg		02/11/24 13:30	02/13/24 02:07	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		02/11/24 13:30	02/13/24 02:07	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		02/11/24 13:30	02/13/24 02:07	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		02/11/24 13:30	02/13/24 02:07	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		02/11/24 13:30	02/13/24 02:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*	*02/11/24 13:30*	*02/13/24 02:07*	*1*
1,4-Difluorobenzene (Surr)	*123*		*70 - 130*	*02/11/24 13:30*	*02/13/24 02:07*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			02/13/24 02:07	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.4	U	50.4	mg/Kg			02/11/24 17:25	1

Eurofins Carlsbad

Client Sample Results

Client: Vertex
Project/Site: JRU DI 2

Job ID: 890-6102-1
SDG: 23 E 06065

Client Sample ID: BH 24 - 03 1'

Lab Sample ID: 890-6102-8
Matrix: Solid
Date Collected: 01/31/24 11:10
Date Received: 02/01/24 16:26
Sample Depth: 1'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.4	U	50.4		mg/Kg		02/06/24 14:12	02/11/24 17:25	1
Diesel Range Organics (Over C10-C28)	<50.4	U	50.4		mg/Kg		02/06/24 14:12	02/11/24 17:25	1
OII Range Organics (Over C28-C36)	<50.4	U	50.4		mg/Kg		02/06/24 14:12	02/11/24 17:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*84*		*70 - 130*	*02/06/24 14:12*	*02/11/24 17:25*	*1*
o-Terphenyl	*88*		*70 - 130*	*02/06/24 14:12*	*02/11/24 17:25*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**101**		4.97		mg/Kg			02/06/24 16:07	1

Client Sample ID: BH 24 - 03 2'

Lab Sample ID: 890-6102-9
Matrix: Solid
Date Collected: 01/31/24 11:20
Date Received: 02/01/24 16:26
Sample Depth: 2'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/11/24 13:30	02/13/24 02:27	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/11/24 13:30	02/13/24 02:27	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/11/24 13:30	02/13/24 02:27	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		02/11/24 13:30	02/13/24 02:27	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/11/24 13:30	02/13/24 02:27	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		02/11/24 13:30	02/13/24 02:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*02/11/24 13:30*	*02/13/24 02:27*	*1*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*	*02/11/24 13:30*	*02/13/24 02:27*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			02/13/24 02:27	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			02/11/24 17:47	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/06/24 14:12	02/11/24 17:47	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/06/24 14:12	02/11/24 17:47	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/06/24 14:12	02/11/24 17:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*81*		*70 - 130*	*02/06/24 14:12*	*02/11/24 17:47*	*1*
o-Terphenyl	*83*		*70 - 130*	*02/06/24 14:12*	*02/11/24 17:47*	*1*

Client Sample Results

Client: Vertex
Project/Site: JRU DI 2

Job ID: 890-6102-1
SDG: 23 E 06065

Client Sample ID: BH 24 - 03 2'
Date Collected: 01/31/24 11:20
Date Received: 02/01/24 16:26
Sample Depth: 2'

Lab Sample ID: 890-6102-9
Matrix: Solid

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	57.1		5.03		mg/Kg			02/06/24 16:11	1

Surrogate Summary

Client: Vertex
Project/Site: JRU DI 2

Job ID: 890-6102-1
SDG: 23 E 06065

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
890-6087-A-1-G MS	Matrix Spike	98	103
890-6087-A-1-H MSD	Matrix Spike Duplicate	100	110
890-6102-1	BH 24 - 01 0'	216 S1+	75
890-6102-2	BH 24 - 01 2'	117	122
890-6102-3	BH 24 - 01 3'	111	111
890-6102-4	BH 24 - 02 0'	112	110
890-6102-5	BH 24 - 02 1'	111	113
890-6102-6	BH 24 - 02 2'	85	108
890-6102-6 MS	BH 24 - 02 2'	103	107
890-6102-6 MSD	BH 24 - 02 2'	105	106
890-6102-7	BH 24 - 03 0'	101	123
890-6102-8	BH 24 - 03 1'	114	123
890-6102-9	BH 24 - 03 2'	105	112
LCS 880-72820/1-A	Lab Control Sample	97	106
LCS 880-72821/1-A	Lab Control Sample	102	101
LCSD 880-72820/2-A	Lab Control Sample Dup	98	102
LCSD 880-72821/2-A	Lab Control Sample Dup	95	99
MB 880-72820/5-A	Method Blank	128	137 S1+
MB 880-72821/5-A	Method Blank	127	130
MB 880-72837/5-A	Method Blank	118	122
MB 880-73000/5-A	Method Blank	124	123

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-38939-A-41-C MS	Matrix Spike	109	100
880-38939-A-41-D MSD	Matrix Spike Duplicate	88	80
890-6102-1	BH 24 - 01 0'	127	82
890-6102-2	BH 24 - 01 2'	82	77
890-6102-3	BH 24 - 01 3'	31 S1-	23 S1-
890-6102-4	BH 24 - 02 0'	22 S1-	12 S1-
890-6102-5	BH 24 - 02 1'	5 S1-	0.3 S1-
890-6102-6	BH 24 - 02 2'	21 S1-	14 S1-
890-6102-7	BH 24 - 03 0'	78	81
890-6102-8	BH 24 - 03 1'	84	88
890-6102-9	BH 24 - 03 2'	81	83
LCS 880-72518/2-A	Lab Control Sample	117	113
LCSD 880-72518/3-A	Lab Control Sample Dup	128	124
MB 880-72518/1-A	Method Blank	171 S1+	184 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Vertex
Project/Site: JRU DI 2

Job ID: 890-6102-1
SDG: 23 E 06065

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-72820/5-A
Matrix: Solid
Analysis Batch: 73011

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 72820

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/11/24 13:28	02/14/24 00:20	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/11/24 13:28	02/14/24 00:20	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/11/24 13:28	02/14/24 00:20	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/11/24 13:28	02/14/24 00:20	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/11/24 13:28	02/14/24 00:20	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/11/24 13:28	02/14/24 00:20	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*128*		*70 - 130*	*02/11/24 13:28*	*02/14/24 00:20*	*1*
1,4-Difluorobenzene (Surr)	*137*	*S1+*	*70 - 130*	*02/11/24 13:28*	*02/14/24 00:20*	*1*

Lab Sample ID: LCS 880-72820/1-A
Matrix: Solid
Analysis Batch: 73011

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 72820

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09088		mg/Kg		91	70 - 130		
Toluene			0.100	0.08502		mg/Kg		85	70 - 130		
Ethylbenzene			0.100	0.07830		mg/Kg		78	70 - 130		
m-Xylene & p-Xylene			0.200	0.1800		mg/Kg		90	70 - 130		
o-Xylene			0.100	0.08129		mg/Kg		81	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

Lab Sample ID: LCSD 880-72820/2-A
Matrix: Solid
Analysis Batch: 73011

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 72820

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1019		mg/Kg		102	70 - 130	11	35
Toluene			0.100	0.09440		mg/Kg		94	70 - 130	10	35
Ethylbenzene			0.100	0.09240		mg/Kg		92	70 - 130	17	35
m-Xylene & p-Xylene			0.200	0.2069		mg/Kg		103	70 - 130	14	35
o-Xylene			0.100	0.09119		mg/Kg		91	70 - 130	11	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: 890-6087-A-1-G MS
Matrix: Solid
Analysis Batch: 73011

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 72820

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00200	U F1	0.0996	0.06989		mg/Kg		70	70 - 130		
Toluene	<0.00200	U F1	0.0996	0.07284		mg/Kg		73	70 - 130		

QC Sample Results

Client: Vertex
Project/Site: JRU DI 2

Job ID: 890-6102-1
SDG: 23 E 06065

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

Lab Sample ID: 890-6087-A-1-G MS
Matrix: Solid
Analysis Batch: 73011

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 72820

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00200	U F1	0.0996	0.06311	F1	mg/Kg		63	70 - 130
m-Xylene & p-Xylene	<0.00401	U	0.199	0.1533		mg/Kg		77	70 - 130
o-Xylene	<0.00200	U	0.0996	0.07150		mg/Kg		72	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: 890-6087-A-1-H MSD
Matrix: Solid
Analysis Batch: 73011

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 72820

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U F1	0.0990	0.06872	F1	mg/Kg		69	70 - 130	2	35
Toluene	<0.00200	U F1	0.0990	0.06874	F1	mg/Kg		69	70 - 130	6	35
Ethylbenzene	<0.00200	U F1	0.0990	0.06232	F1	mg/Kg		63	70 - 130	1	35
m-Xylene & p-Xylene	<0.00401	U	0.198	0.1573		mg/Kg		79	70 - 130	3	35
o-Xylene	<0.00200	U	0.0990	0.07326		mg/Kg		74	70 - 130	2	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*

Lab Sample ID: MB 880-72821/5-A
Matrix: Solid
Analysis Batch: 72835

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 72821

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/11/24 13:30	02/13/24 00:57	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/11/24 13:30	02/13/24 00:57	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/11/24 13:30	02/13/24 00:57	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/11/24 13:30	02/13/24 00:57	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/11/24 13:30	02/13/24 00:57	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/11/24 13:30	02/13/24 00:57	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*127*		*70 - 130*	*02/11/24 13:30*	*02/13/24 00:57*	*1*
1,4-Difluorobenzene (Surr)	*130*		*70 - 130*	*02/11/24 13:30*	*02/13/24 00:57*	*1*

Lab Sample ID: LCS 880-72821/1-A
Matrix: Solid
Analysis Batch: 72835

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 72821

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.09626		mg/Kg		96	70 - 130
Toluene	0.100	0.09713		mg/Kg		97	70 - 130
Ethylbenzene	0.100	0.08842		mg/Kg		88	70 - 130
m-Xylene & p-Xylene	0.200	0.2090		mg/Kg		104	70 - 130

QC Sample Results

Client: Vertex
Project/Site: JRU DI 2

Job ID: 890-6102-1
SDG: 23 E 06065

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

Lab Sample ID: LCS 880-72821/1-A
Matrix: Solid
Analysis Batch: 72835

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 72821

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
o-Xylene			0.100	0.09157		mg/Kg		92	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: LCSD 880-72821/2-A
Matrix: Solid
Analysis Batch: 72835

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 72821

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09743		mg/Kg		97	70 - 130	1	35
Toluene			0.100	0.09577		mg/Kg		96	70 - 130	1	35
Ethylbenzene			0.100	0.09049		mg/Kg		90	70 - 130	2	35
m-Xylene & p-Xylene			0.200	0.2036		mg/Kg		102	70 - 130	3	35
o-Xylene			0.100	0.08994		mg/Kg		90	70 - 130	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: 890-6102-6 MS
Matrix: Solid
Analysis Batch: 72835

Client Sample ID: BH 24 - 02 2'
Prep Type: Total/NA
Prep Batch: 72821

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00200	U F1	0.0996	0.06796	F1	mg/Kg		68	70 - 130		
Toluene	<0.00200	U F1	0.0996	0.06838	F1	mg/Kg		69	70 - 130		
Ethylbenzene	<0.00200	U F1	0.0996	0.05975	F1	mg/Kg		60	70 - 130		
m-Xylene & p-Xylene	<0.00401	U	0.199	0.1426		mg/Kg		72	70 - 130		
o-Xylene	<0.00200	U F1	0.0996	0.07199		mg/Kg		72	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

Lab Sample ID: 890-6102-6 MSD
Matrix: Solid
Analysis Batch: 72835

Client Sample ID: BH 24 - 02 2'
Prep Type: Total/NA
Prep Batch: 72821

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U F1	0.0990	0.06864	F1	mg/Kg		69	70 - 130	1	35
Toluene	<0.00200	U F1	0.0990	0.06759	F1	mg/Kg		68	70 - 130	1	35
Ethylbenzene	<0.00200	U F1	0.0990	0.06441	F1	mg/Kg		65	70 - 130	7	35
m-Xylene & p-Xylene	<0.00401	U	0.198	0.1530		mg/Kg		77	70 - 130	7	35
o-Xylene	<0.00200	U F1	0.0990	0.06881	F1	mg/Kg		69	70 - 130	5	35

QC Sample Results

Client: Vertex
Project/Site: JRU DI 2

Job ID: 890-6102-1
SDG: 23 E 06065

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

Lab Sample ID: 890-6102-6 MSD
Matrix: Solid
Analysis Batch: 72835

Client Sample ID: BH 24 - 02 2'
Prep Type: Total/NA
Prep Batch: 72821

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

Lab Sample ID: MB 880-72837/5-A
Matrix: Solid
Analysis Batch: 72835

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 72837

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/12/24 08:41	02/12/24 13:20	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/12/24 08:41	02/12/24 13:20	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/12/24 08:41	02/12/24 13:20	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/12/24 08:41	02/12/24 13:20	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/12/24 08:41	02/12/24 13:20	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/12/24 08:41	02/12/24 13:20	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*	*02/12/24 08:41*	*02/12/24 13:20*	*1*
1,4-Difluorobenzene (Surr)	*122*		*70 - 130*	*02/12/24 08:41*	*02/12/24 13:20*	*1*

Lab Sample ID: MB 880-73000/5-A
Matrix: Solid
Analysis Batch: 73011

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 73000

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/13/24 08:16	02/13/24 12:44	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/13/24 08:16	02/13/24 12:44	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/13/24 08:16	02/13/24 12:44	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/13/24 08:16	02/13/24 12:44	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/13/24 08:16	02/13/24 12:44	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/13/24 08:16	02/13/24 12:44	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*124*		*70 - 130*	*02/13/24 08:16*	*02/13/24 12:44*	*1*
1,4-Difluorobenzene (Surr)	*123*		*70 - 130*	*02/13/24 08:16*	*02/13/24 12:44*	*1*

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

Lab Sample ID: MB 880-72518/1-A
Matrix: Solid
Analysis Batch: 72814

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 72518

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/06/24 14:12	02/11/24 07:47	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/06/24 14:12	02/11/24 07:47	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/06/24 14:12	02/11/24 07:47	1

QC Sample Results

Client: Vertex
Project/Site: JRU DI 2

Job ID: 890-6102-1
SDG: 23 E 06065

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

Lab Sample ID: MB 880-72518/1-A
Matrix: Solid
Analysis Batch: 72814

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 72518

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	171	S1+	70 - 130	02/06/24 14:12	02/11/24 07:47	1
o-Terphenyl	184	S1+	70 - 130	02/06/24 14:12	02/11/24 07:47	1

Lab Sample ID: LCS 880-72518/2-A
Matrix: Solid
Analysis Batch: 72814

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 72518

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	988.2		mg/Kg		99	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1013		mg/Kg		101	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	117		70 - 130
o-Terphenyl	113		70 - 130

Lab Sample ID: LCSD 880-72518/3-A
Matrix: Solid
Analysis Batch: 72814

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 72518

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1120		mg/Kg		112	70 - 130	13	20
Diesel Range Organics (Over C10-C28)			1000	1134		mg/Kg		113	70 - 130	11	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	128		70 - 130
o-Terphenyl	124		70 - 130

Lab Sample ID: 880-38939-A-41-C MS
Matrix: Solid
Analysis Batch: 72814

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 72518

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.8	U F2	1000	1100		mg/Kg		106	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.8	U F2	1000	1017		mg/Kg		99	70 - 130		

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	109		70 - 130
o-Terphenyl	100		70 - 130

QC Sample Results

Client: Vertex
Project/Site: JRU DI 2

Job ID: 890-6102-1
SDG: 23 E 06065

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

Lab Sample ID: 880-38939-A-41-D MSD
Matrix: Solid
Analysis Batch: 72814

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 72518

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.8	U F2	1000	890.6	F2	mg/Kg		85	70 - 130	21	20
Diesel Range Organics (Over C10-C28)	<49.8	U F2	1000	825.7	F2	mg/Kg		80	70 - 130	21	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*88*		*70 - 130*
o-Terphenyl	*80*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-72306/1-A
Matrix: Solid
Analysis Batch: 72468

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			02/06/24 15:01	1

Lab Sample ID: LCS 880-72306/2-A
Matrix: Solid
Analysis Batch: 72468

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	236.8		mg/Kg		95	90 - 110		

Lab Sample ID: LCSD 880-72306/3-A
Matrix: Solid
Analysis Batch: 72468

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	237.2		mg/Kg		95	90 - 110	0	20

Lab Sample ID: 890-6102-1 MS
Matrix: Solid
Analysis Batch: 72468

Client Sample ID: BH 24 - 01 0'
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	260		252	501.6		mg/Kg		96	90 - 110		

Lab Sample ID: 890-6102-1 MSD
Matrix: Solid
Analysis Batch: 72468

Client Sample ID: BH 24 - 01 0'
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	260		252	502.0		mg/Kg		96	90 - 110	0	20

QC Association Summary

Client: Vertex
Project/Site: JRU DI 2

Job ID: 890-6102-1
SDG: 23 E 06065

GC VOA

Prep Batch: 72820

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6102-1	BH 24 - 01 0'	Total/NA	Solid	5035	
890-6102-2	BH 24 - 01 2'	Total/NA	Solid	5035	
890-6102-3	BH 24 - 01 3'	Total/NA	Solid	5035	
890-6102-4	BH 24 - 02 0'	Total/NA	Solid	5035	
890-6102-5	BH 24 - 02 1'	Total/NA	Solid	5035	
MB 880-72820/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-72820/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-72820/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-6087-A-1-G MS	Matrix Spike	Total/NA	Solid	5035	
890-6087-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 72821

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6102-6	BH 24 - 02 2'	Total/NA	Solid	5035	
890-6102-7	BH 24 - 03 0'	Total/NA	Solid	5035	
890-6102-8	BH 24 - 03 1'	Total/NA	Solid	5035	
890-6102-9	BH 24 - 03 2'	Total/NA	Solid	5035	
MB 880-72821/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-72821/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-72821/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-6102-6 MS	BH 24 - 02 2'	Total/NA	Solid	5035	
890-6102-6 MSD	BH 24 - 02 2'	Total/NA	Solid	5035	

Analysis Batch: 72835

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6102-6	BH 24 - 02 2'	Total/NA	Solid	8021B	72821
890-6102-7	BH 24 - 03 0'	Total/NA	Solid	8021B	72821
890-6102-8	BH 24 - 03 1'	Total/NA	Solid	8021B	72821
890-6102-9	BH 24 - 03 2'	Total/NA	Solid	8021B	72821
MB 880-72821/5-A	Method Blank	Total/NA	Solid	8021B	72821
MB 880-72837/5-A	Method Blank	Total/NA	Solid	8021B	72837
LCS 880-72821/1-A	Lab Control Sample	Total/NA	Solid	8021B	72821
LCSD 880-72821/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	72821
890-6102-6 MS	BH 24 - 02 2'	Total/NA	Solid	8021B	72821
890-6102-6 MSD	BH 24 - 02 2'	Total/NA	Solid	8021B	72821

Prep Batch: 72837

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-72837/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 73000

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-73000/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 73011

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6102-1	BH 24 - 01 0'	Total/NA	Solid	8021B	72820
890-6102-2	BH 24 - 01 2'	Total/NA	Solid	8021B	72820
890-6102-3	BH 24 - 01 3'	Total/NA	Solid	8021B	72820
890-6102-4	BH 24 - 02 0'	Total/NA	Solid	8021B	72820
890-6102-5	BH 24 - 02 1'	Total/NA	Solid	8021B	72820

QC Association Summary

Client: Vertex
Project/Site: JRU DI 2

Job ID: 890-6102-1
SDG: 23 E 06065

GC VOA (Continued)

Analysis Batch: 73011 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-72820/5-A	Method Blank	Total/NA	Solid	8021B	72820
MB 880-73000/5-A	Method Blank	Total/NA	Solid	8021B	73000
LCS 880-72820/1-A	Lab Control Sample	Total/NA	Solid	8021B	72820
LCSD 880-72820/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	72820
890-6087-A-1-G MS	Matrix Spike	Total/NA	Solid	8021B	72820
890-6087-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	72820

Analysis Batch: 73052

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6102-1	BH 24 - 01 0'	Total/NA	Solid	Total BTEX	
890-6102-2	BH 24 - 01 2'	Total/NA	Solid	Total BTEX	
890-6102-3	BH 24 - 01 3'	Total/NA	Solid	Total BTEX	
890-6102-4	BH 24 - 02 0'	Total/NA	Solid	Total BTEX	
890-6102-5	BH 24 - 02 1'	Total/NA	Solid	Total BTEX	
890-6102-6	BH 24 - 02 2'	Total/NA	Solid	Total BTEX	
890-6102-7	BH 24 - 03 0'	Total/NA	Solid	Total BTEX	
890-6102-8	BH 24 - 03 1'	Total/NA	Solid	Total BTEX	
890-6102-9	BH 24 - 03 2'	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 72518

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6102-1	BH 24 - 01 0'	Total/NA	Solid	8015NM Prep	
890-6102-2	BH 24 - 01 2'	Total/NA	Solid	8015NM Prep	
890-6102-3	BH 24 - 01 3'	Total/NA	Solid	8015NM Prep	
890-6102-4	BH 24 - 02 0'	Total/NA	Solid	8015NM Prep	
890-6102-5	BH 24 - 02 1'	Total/NA	Solid	8015NM Prep	
890-6102-6	BH 24 - 02 2'	Total/NA	Solid	8015NM Prep	
890-6102-7	BH 24 - 03 0'	Total/NA	Solid	8015NM Prep	
890-6102-8	BH 24 - 03 1'	Total/NA	Solid	8015NM Prep	
890-6102-9	BH 24 - 03 2'	Total/NA	Solid	8015NM Prep	
MB 880-72518/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-72518/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-72518/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-38939-A-41-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-38939-A-41-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 72814

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6102-1	BH 24 - 01 0'	Total/NA	Solid	8015B NM	72518
890-6102-2	BH 24 - 01 2'	Total/NA	Solid	8015B NM	72518
890-6102-3	BH 24 - 01 3'	Total/NA	Solid	8015B NM	72518
890-6102-4	BH 24 - 02 0'	Total/NA	Solid	8015B NM	72518
890-6102-5	BH 24 - 02 1'	Total/NA	Solid	8015B NM	72518
890-6102-6	BH 24 - 02 2'	Total/NA	Solid	8015B NM	72518
890-6102-7	BH 24 - 03 0'	Total/NA	Solid	8015B NM	72518
890-6102-8	BH 24 - 03 1'	Total/NA	Solid	8015B NM	72518
890-6102-9	BH 24 - 03 2'	Total/NA	Solid	8015B NM	72518
MB 880-72518/1-A	Method Blank	Total/NA	Solid	8015B NM	72518
LCS 880-72518/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	72518

QC Association Summary

Client: Vertex
Project/Site: JRU DI 2

Job ID: 890-6102-1
SDG: 23 E 06065

GC Semi VOA (Continued)

Analysis Batch: 72814 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-72518/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	72518
880-38939-A-41-C MS	Matrix Spike	Total/NA	Solid	8015B NM	72518
880-38939-A-41-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	72518

Analysis Batch: 72973

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6102-1	BH 24 - 01 0'	Total/NA	Solid	8015 NM	
890-6102-2	BH 24 - 01 2'	Total/NA	Solid	8015 NM	
890-6102-3	BH 24 - 01 3'	Total/NA	Solid	8015 NM	
890-6102-4	BH 24 - 02 0'	Total/NA	Solid	8015 NM	
890-6102-5	BH 24 - 02 1'	Total/NA	Solid	8015 NM	
890-6102-6	BH 24 - 02 2'	Total/NA	Solid	8015 NM	
890-6102-7	BH 24 - 03 0'	Total/NA	Solid	8015 NM	
890-6102-8	BH 24 - 03 1'	Total/NA	Solid	8015 NM	
890-6102-9	BH 24 - 03 2'	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 72306

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6102-1	BH 24 - 01 0'	Soluble	Solid	DI Leach	
890-6102-2	BH 24 - 01 2'	Soluble	Solid	DI Leach	
890-6102-3	BH 24 - 01 3'	Soluble	Solid	DI Leach	
890-6102-4	BH 24 - 02 0'	Soluble	Solid	DI Leach	
890-6102-5	BH 24 - 02 1'	Soluble	Solid	DI Leach	
890-6102-6	BH 24 - 02 2'	Soluble	Solid	DI Leach	
890-6102-7	BH 24 - 03 0'	Soluble	Solid	DI Leach	
890-6102-8	BH 24 - 03 1'	Soluble	Solid	DI Leach	
890-6102-9	BH 24 - 03 2'	Soluble	Solid	DI Leach	
MB 880-72306/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-72306/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-72306/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-6102-1 MS	BH 24 - 01 0'	Soluble	Solid	DI Leach	
890-6102-1 MSD	BH 24 - 01 0'	Soluble	Solid	DI Leach	

Analysis Batch: 72468

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6102-1	BH 24 - 01 0'	Soluble	Solid	300.0	72306
890-6102-2	BH 24 - 01 2'	Soluble	Solid	300.0	72306
890-6102-3	BH 24 - 01 3'	Soluble	Solid	300.0	72306
890-6102-4	BH 24 - 02 0'	Soluble	Solid	300.0	72306
890-6102-5	BH 24 - 02 1'	Soluble	Solid	300.0	72306
890-6102-6	BH 24 - 02 2'	Soluble	Solid	300.0	72306
890-6102-7	BH 24 - 03 0'	Soluble	Solid	300.0	72306
890-6102-8	BH 24 - 03 1'	Soluble	Solid	300.0	72306
890-6102-9	BH 24 - 03 2'	Soluble	Solid	300.0	72306
MB 880-72306/1-A	Method Blank	Soluble	Solid	300.0	72306
LCS 880-72306/2-A	Lab Control Sample	Soluble	Solid	300.0	72306
LCSD 880-72306/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	72306
890-6102-1 MS	BH 24 - 01 0'	Soluble	Solid	300.0	72306
890-6102-1 MSD	BH 24 - 01 0'	Soluble	Solid	300.0	72306

Lab Chronicle

Client: Vertex
Project/Site: JRU DI 2

Job ID: 890-6102-1
SDG: 23 E 06065

Client Sample ID: BH 24 - 01 0'
Lab Sample ID: 890-6102-1
Date Collected: 01/31/24 10:00
Matrix: Solid
Date Received: 02/01/24 16:26

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	72820	02/11/24 13:28	MNR	EET MID
Total/NA	Analysis	8021B		20	5 mL	5 mL	73011	02/14/24 09:13	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			73052	02/14/24 09:13	SM	EET MID
Total/NA	Analysis	8015 NM		1			72973	02/11/24 14:24	SM	EET MID
Total/NA	Prep	8015NM Prep			9.90 g	10 mL	72518	02/06/24 14:12	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	72814	02/11/24 14:24	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	72306	02/04/24 12:45	CH	EET MID
Soluble	Analysis	300.0		1			72468	02/06/24 15:15	CH	EET MID

Client Sample ID: BH 24 - 01 2'
Lab Sample ID: 890-6102-2
Date Collected: 01/31/24 10:10
Matrix: Solid
Date Received: 02/01/24 16:26

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	72820	02/11/24 13:28	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	73011	02/14/24 07:24	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			73052	02/14/24 07:24	SM	EET MID
Total/NA	Analysis	8015 NM		1			72973	02/11/24 15:08	SM	EET MID
Total/NA	Prep	8015NM Prep			10.06 g	10 mL	72518	02/06/24 14:12	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	72814	02/11/24 15:08	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	72306	02/04/24 12:45	CH	EET MID
Soluble	Analysis	300.0		1			72468	02/06/24 15:29	CH	EET MID

Client Sample ID: BH 24 - 01 3'
Lab Sample ID: 890-6102-3
Date Collected: 01/31/24 10:20
Matrix: Solid
Date Received: 02/01/24 16:26

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	72820	02/11/24 13:28	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	73011	02/14/24 07:45	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			73052	02/14/24 07:45	SM	EET MID
Total/NA	Analysis	8015 NM		1			72973	02/11/24 15:31	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	72518	02/06/24 14:12	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	72814	02/11/24 15:31	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	72306	02/04/24 12:45	CH	EET MID
Soluble	Analysis	300.0		1			72468	02/06/24 15:34	CH	EET MID

Client Sample ID: BH 24 - 02 0'
Lab Sample ID: 890-6102-4
Date Collected: 01/31/24 10:30
Matrix: Solid
Date Received: 02/01/24 16:26

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	72820	02/11/24 13:28	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	73011	02/14/24 08:05	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			73052	02/14/24 08:05	SM	EET MID

Lab Chronicle

Client: Vertex
Project/Site: JRU DI 2

Job ID: 890-6102-1
SDG: 23 E 06065

Client Sample ID: BH 24 - 02 0'

Lab Sample ID: 890-6102-4
Matrix: Solid
Date Collected: 01/31/24 10:30
Date Received: 02/01/24 16:26

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			72973	02/11/24 15:54	SM	EET MID
Total/NA	Prep	8015NM Prep			9.97 g	10 mL	72518	02/06/24 14:12	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	72814	02/11/24 15:54	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	72306	02/04/24 12:45	CH	EET MID
Soluble	Analysis	300.0		1			72468	02/06/24 15:38	CH	EET MID

Client Sample ID: BH 24 - 02 1'

Lab Sample ID: 890-6102-5
Matrix: Solid
Date Collected: 01/31/24 10:40
Date Received: 02/01/24 16:26

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	72820	02/11/24 13:28	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	73011	02/14/24 08:25	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			73052	02/14/24 08:25	SM	EET MID
Total/NA	Analysis	8015 NM		1			72973	02/11/24 16:17	SM	EET MID
Total/NA	Prep	8015NM Prep			9.92 g	10 mL	72518	02/06/24 14:12	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	72814	02/11/24 16:17	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	72306	02/04/24 12:45	CH	EET MID
Soluble	Analysis	300.0		1			72468	02/06/24 15:43	CH	EET MID

Client Sample ID: BH 24 - 02 2'

Lab Sample ID: 890-6102-6
Matrix: Solid
Date Collected: 01/31/24 10:50
Date Received: 02/01/24 16:26

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	72821	02/11/24 13:30	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72835	02/13/24 01:26	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			73052	02/13/24 01:26	SM	EET MID
Total/NA	Analysis	8015 NM		1			72973	02/11/24 16:40	SM	EET MID
Total/NA	Prep	8015NM Prep			9.95 g	10 mL	72518	02/06/24 14:12	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	72814	02/11/24 16:40	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	72306	02/04/24 12:45	CH	EET MID
Soluble	Analysis	300.0		1			72468	02/06/24 15:57	CH	EET MID

Client Sample ID: BH 24 - 03 0'

Lab Sample ID: 890-6102-7
Matrix: Solid
Date Collected: 01/31/24 11:00
Date Received: 02/01/24 16:26

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	72821	02/11/24 13:30	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72835	02/13/24 01:46	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			73052	02/13/24 01:46	SM	EET MID
Total/NA	Analysis	8015 NM		1			72973	02/11/24 17:02	SM	EET MID
Total/NA	Prep	8015NM Prep			9.94 g	10 mL	72518	02/06/24 14:12	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	72814	02/11/24 17:02	SM	EET MID

Lab Chronicle

Client: Vertex
Project/Site: JRU DI 2

Job ID: 890-6102-1
SDG: 23 E 06065

Client Sample ID: BH 24 - 03 0'

Lab Sample ID: 890-6102-7
Matrix: Solid
Date Collected: 01/31/24 11:00
Date Received: 02/01/24 16:26

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.96 g	50 mL	72306	02/04/24 12:45	CH	EET MID
Soluble	Analysis	300.0		1			72468	02/06/24 16:02	CH	EET MID

Client Sample ID: BH 24 - 03 1'

Lab Sample ID: 890-6102-8
Matrix: Solid
Date Collected: 01/31/24 11:10
Date Received: 02/01/24 16:26

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	72821	02/11/24 13:30	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72835	02/13/24 02:07	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			73052	02/13/24 02:07	SM	EET MID
Total/NA	Analysis	8015 NM		1			72973	02/11/24 17:25	SM	EET MID
Total/NA	Prep	8015NM Prep			9.93 g	10 mL	72518	02/06/24 14:12	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	72814	02/11/24 17:25	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	72306	02/04/24 12:45	CH	EET MID
Soluble	Analysis	300.0		1			72468	02/06/24 16:07	CH	EET MID

Client Sample ID: BH 24 - 03 2'

Lab Sample ID: 890-6102-9
Matrix: Solid
Date Collected: 01/31/24 11:20
Date Received: 02/01/24 16:26

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	72821	02/11/24 13:30	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72835	02/13/24 02:27	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			73052	02/13/24 02:27	SM	EET MID
Total/NA	Analysis	8015 NM		1			72973	02/11/24 17:47	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	72518	02/06/24 14:12	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	72814	02/11/24 17:47	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	72306	02/04/24 12:45	CH	EET MID
Soluble	Analysis	300.0		1			72468	02/06/24 16:11	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Vertex
Project/Site: JRU DI 2

Job ID: 890-6102-1
SDG: 23 E 06065

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24

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

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

Method Summary

Client: Vertex
Project/Site: JRU DI 2

Job ID: 890-6102-1
SDG: 23 E 06065

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

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Vertex
Project/Site: JRU DI 2

Job ID: 890-6102-1
SDG: 23 E 06065

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-6102-1	BH 24 - 01 0'	Solid	01/31/24 10:00	02/01/24 16:26	0'
890-6102-2	BH 24 - 01 2'	Solid	01/31/24 10:10	02/01/24 16:26	2'
890-6102-3	BH 24 - 01 3'	Solid	01/31/24 10:20	02/01/24 16:26	3'
890-6102-4	BH 24 - 02 0'	Solid	01/31/24 10:30	02/01/24 16:26	0'
890-6102-5	BH 24 - 02 1'	Solid	01/31/24 10:40	02/01/24 16:26	1'
890-6102-6	BH 24 - 02 2'	Solid	01/31/24 10:50	02/01/24 16:26	2'
890-6102-7	BH 24 - 03 0'	Solid	01/31/24 11:00	02/01/24 16:26	0'
890-6102-8	BH 24 - 03 1'	Solid	01/31/24 11:10	02/01/24 16:26	1'
890-6102-9	BH 24 - 03 2'	Solid	01/31/24 11:20	02/01/24 16:26	2'

nAPP 2333213502

eurofins | Environment Testing Xenco

Chain of Custody

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

Work Order No: 6102

www.xenco.com Page 1 of 1

Project Manager:	Chance Dixon	Bill to: (if different)	Garrett Green
Company Name:	Vertex / XTO	Company Name:	XTO
Address:	on file	Address:	575 200 0729
City, State ZIP:	on file	City, State ZIP:	
Phone:		Email:	

Work Order Comments

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

Project Name:	JRV DI 2	Turn Around	
Project Number:	23E.06065	☑ Routine ☐ Rush	
Project Location:	JRV DI 2	Due Date:	
Sampler's Name:	Louisavan Costa	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	IR#22
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	0.2
Total Containers:		Corrected Temperature:	0

Sample Identification		Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont
BH24-01	0'	Soil	1.31.24	10:00	0'		1
BH24-01	2'			10:10	2'		2
BH24-01	3'			10:20	3'		
BH24-02	0'			10:30	0'		
BH24-02	1'			10:40	1'		
BH24-02	2'			10:50	2'		
BH24-03	0'			11:00	0'		
BH24-03	1'			11:10	1'		
BH24-03	2'			11:20	2'		9

Parameters: BTEX (8021) · TPH 8015D

Preservative Codes

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

Sample Comments

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

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

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

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Vertex

Job Number: 890-6102-1
SDG Number: 23 E 06065

Login Number: 6102
List Number: 1
Creator: Bruns, Shannon

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Vertex

Job Number: 890-6102-1
SDG Number: 23 E 06065

Login Number: 6102
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 02/05/24 08:29 AM

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

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Chance Dixon
Vertex
3101 Boyd Dr
Carlsbad, New Mexico 88220

Generated 2/13/2024 12:22:51 PM

JOB DESCRIPTION

JRU DI 2
23E - 06065

JOB NUMBER

890-6103-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

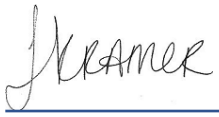
Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

Authorization



Generated
2/13/2024 12:22:51 PM

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

Client: Vertex
Project/Site: JRU DI 2

Laboratory Job ID: 890-6103-1
SDG: 23E - 06065

Table of Contents

Definitions/Glossary

Client: Vertex
Project/Site: JRU DI 2

Job ID: 890-6103-1
SDG: 23E - 06065

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Vertex
Project: JRU DI 2

Job ID: 890-6103-1

Job ID: 890-6103-1 Eurofins Carlsbad

Job Narrative
890-6103-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 2/1/2024 4:26 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.0°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: BH 24 - 04 0' (890-6103-1), BH 24 - 04 1' (890-6103-2), BH 24 - 05 0' (890-6103-3), BH 24 - 05 1' (890-6103-4), BH 24 - 05 2' (890-6103-5), BH 24 - 06 0' (890-6103-6), BH 24 - 06 1' (890-6103-7), BH 24 - 06 2' (890-6103-8), BH 24 - 07 0' (890-6103-9) and BH 24 - 07 1' (890-6103-10).

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-72837 and analytical batch 880-72835 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8021B: Surrogate recovery for the following samples were outside control limits: BH 24 - 05 1' (890-6103-4) and BH 24 - 07 1' (890-6103-10). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The following samples were diluted due to the nature of the sample matrix: BH 24 - 05 0' (890-6103-3) and BH 24 - 05 1' (890-6103-4). Elevated reporting limits (RLs) are provided.

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

GC Semi VOA
Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-72387 and analytical batch 880-72694 was outside the upper control limits.

Method 8015MOD_NM: The method blank for preparation batch 880-72387 and analytical batch 880-72694 contained Gasoline Range Organics (GRO)-C6-C10 and Diesel Range Organics (Over C10-C28) above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8015MOD_NM: The matrix spike duplicate (MSD) recoveries for preparation batch 880-72387 and analytical batch 880-72694 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

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

Client Sample Results

Client: Vertex
Project/Site: JRU DI 2

Job ID: 890-6103-1
SDG: 23E - 06065

Client Sample ID: BH 24 - 04 0'

Lab Sample ID: 890-6103-1
Matrix: Solid
Date Collected: 02/01/24 09:30
Date Received: 02/01/24 16:26
Sample Depth: 0'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		02/12/24 08:41	02/12/24 18:43	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/12/24 08:41	02/12/24 18:43	1
Ethylbenzene	**0.00317**		0.00199		mg/Kg		02/12/24 08:41	02/12/24 18:43	1
m-Xylene & p-Xylene	**0.0177**		0.00398		mg/Kg		02/12/24 08:41	02/12/24 18:43	1
o-Xylene	**0.0170**		0.00199		mg/Kg		02/12/24 08:41	02/12/24 18:43	1
Xylenes, Total	**0.0347**		0.00398		mg/Kg		02/12/24 08:41	02/12/24 18:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*02/12/24 08:41*	*02/12/24 18:43*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*02/12/24 08:41*	*02/12/24 18:43*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.0379**		0.00398		mg/Kg			02/12/24 18:43	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**1460**		50.1		mg/Kg			02/10/24 01:11	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**67.3**		50.1		mg/Kg		02/05/24 13:57	02/10/24 01:11	1
Diesel Range Organics (Over C10-C28)	**1340**		50.1		mg/Kg		02/05/24 13:57	02/10/24 01:11	1
Oil Range Organics (Over C28-C36)	**52.0**		50.1		mg/Kg		02/05/24 13:57	02/10/24 01:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*93*		*70 - 130*	*02/05/24 13:57*	*02/10/24 01:11*	*1*
o-Terphenyl	*95*		*70 - 130*	*02/05/24 13:57*	*02/10/24 01:11*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**162**		5.01		mg/Kg			02/06/24 16:16	1

Client Sample ID: BH 24 - 04 1'

Lab Sample ID: 890-6103-2
Matrix: Solid
Date Collected: 02/01/24 09:40
Date Received: 02/01/24 16:26
Sample Depth: 1'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		02/12/24 08:41	02/12/24 19:03	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/12/24 08:41	02/12/24 19:03	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/12/24 08:41	02/12/24 19:03	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		02/12/24 08:41	02/12/24 19:03	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/12/24 08:41	02/12/24 19:03	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		02/12/24 08:41	02/12/24 19:03	1

Client Sample Results

Client: Vertex
Project/Site: JRU DI 2

Job ID: 890-6103-1
SDG: 23E - 06065

Client Sample ID: BH 24 - 04 1'

Lab Sample ID: 890-6103-2
Matrix: Solid
Date Collected: 02/01/24 09:40
Date Received: 02/01/24 16:26
Sample Depth: 1'

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*02/12/24 08:41*	*02/12/24 19:03*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*02/12/24 08:41*	*02/12/24 19:03*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			02/12/24 19:03	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**170**		50.4	mg/Kg			02/10/24 01:33	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.4	U	50.4	mg/Kg		02/05/24 13:57	02/10/24 01:33	1
Diesel Range Organics (Over C10-C28)	**170**		50.4	mg/Kg		02/05/24 13:57	02/10/24 01:33	1
OII Range Organics (Over C28-C36)	<50.4	U	50.4	mg/Kg		02/05/24 13:57	02/10/24 01:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*98*		*70 - 130*	*02/05/24 13:57*	*02/10/24 01:33*	*1*
o-Terphenyl	*106*		*70 - 130*	*02/05/24 13:57*	*02/10/24 01:33*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**114**		5.05	mg/Kg			02/06/24 16:20	1

Client Sample ID: BH 24 - 05 0'

Lab Sample ID: 890-6103-3
Matrix: Solid
Date Collected: 02/01/24 09:50
Date Received: 02/01/24 16:26
Sample Depth: 0'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0499	U	0.0499	mg/Kg		02/12/24 08:41	02/12/24 21:27	25
Toluene	**2.15**		0.0499	mg/Kg		02/12/24 08:41	02/12/24 21:27	25
Ethylbenzene	**1.95**		0.0499	mg/Kg		02/12/24 08:41	02/12/24 21:27	25
m-Xylene & p-Xylene	**7.17**		0.0998	mg/Kg		02/12/24 08:41	02/12/24 21:27	25
o-Xylene	**4.52**		0.0499	mg/Kg		02/12/24 08:41	02/12/24 21:27	25
Xylenes, Total	**11.7**		0.0998	mg/Kg		02/12/24 08:41	02/12/24 21:27	25

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*	*02/12/24 08:41*	*02/12/24 21:27*	*25*
1,4-Difluorobenzene (Surr)	*71*		*70 - 130*	*02/12/24 08:41*	*02/12/24 21:27*	*25*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**15.8**		0.0998	mg/Kg			02/12/24 21:27	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**4260**		50.5	mg/Kg			02/10/24 01:55	1

Eurofins Carlsbad

Client Sample Results

Client: Vertex
Project/Site: JRU DI 2

Job ID: 890-6103-1
SDG: 23E - 06065

Client Sample ID: BH 24 - 05 0'

Lab Sample ID: 890-6103-3
Matrix: Solid
Date Collected: 02/01/24 09:50
Date Received: 02/01/24 16:26
Sample Depth: 0'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	790		50.5		mg/Kg		02/05/24 13:57	02/10/24 01:55	1
Diesel Range Organics (Over C10-C28)	3330		50.5		mg/Kg		02/05/24 13:57	02/10/24 01:55	1
Oil Range Organics (Over C28-C36)	141		50.5		mg/Kg		02/05/24 13:57	02/10/24 01:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*102*		*70 - 130*	*02/05/24 13:57*	*02/10/24 01:55*	*1*
o-Terphenyl	*90*		*70 - 130*	*02/05/24 13:57*	*02/10/24 01:55*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	131		4.95		mg/Kg			02/06/24 16:34	1

Client Sample ID: BH 24 - 05 1'

Lab Sample ID: 890-6103-4
Matrix: Solid
Date Collected: 02/01/24 10:00
Date Received: 02/01/24 16:26
Sample Depth: 1'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0503	U	0.0503		mg/Kg		02/12/24 08:41	02/12/24 21:48	25
Toluene	2.89		0.0503		mg/Kg		02/12/24 08:41	02/12/24 21:48	25
Ethylbenzene	1.78		0.0503		mg/Kg		02/12/24 08:41	02/12/24 21:48	25
m-Xylene & p-Xylene	8.96		0.101		mg/Kg		02/12/24 08:41	02/12/24 21:48	25
o-Xylene	3.63		0.0503		mg/Kg		02/12/24 08:41	02/12/24 21:48	25
Xylenes, Total	12.6		0.101		mg/Kg		02/12/24 08:41	02/12/24 21:48	25

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*76*		*70 - 130*	*02/12/24 08:41*	*02/12/24 21:48*	*25*
1,4-Difluorobenzene (Surr)	*55*	*S1-*	*70 - 130*	*02/12/24 08:41*	*02/12/24 21:48*	*25*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	17.3		0.101		mg/Kg			02/12/24 21:48	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	3630		50.0		mg/Kg			02/10/24 02:17	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	832		50.0		mg/Kg		02/05/24 13:57	02/10/24 02:17	1
Diesel Range Organics (Over C10-C28)	2680		50.0		mg/Kg		02/05/24 13:57	02/10/24 02:17	1
Oil Range Organics (Over C28-C36)	115		50.0		mg/Kg		02/05/24 13:57	02/10/24 02:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*116*		*70 - 130*	*02/05/24 13:57*	*02/10/24 02:17*	*1*

Client Sample Results

Client: Vertex
Project/Site: JRU DI 2

Job ID: 890-6103-1
SDG: 23E - 06065

Client Sample ID: BH 24 - 05 1'

Lab Sample ID: 890-6103-4
Matrix: Solid
Date Collected: 02/01/24 10:00
Date Received: 02/01/24 16:26
Sample Depth: 1'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	*101*		*70 - 130*	*02/05/24 13:57*	*02/10/24 02:17*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**107**		5.03	mg/Kg			02/06/24 16:39	1

Client Sample ID: BH 24 - 05 2'

Lab Sample ID: 890-6103-5
Matrix: Solid
Date Collected: 02/01/24 10:10
Date Received: 02/01/24 16:26
Sample Depth: 2'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		02/12/24 08:41	02/12/24 19:24	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/12/24 08:41	02/12/24 19:24	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/12/24 08:41	02/12/24 19:24	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		02/12/24 08:41	02/12/24 19:24	1
o-Xylene	**0.00538**		0.00200	mg/Kg		02/12/24 08:41	02/12/24 19:24	1
Xylenes, Total	**0.00538**		0.00401	mg/Kg		02/12/24 08:41	02/12/24 19:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*	*02/12/24 08:41*	*02/12/24 19:24*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*02/12/24 08:41*	*02/12/24 19:24*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.00538**		0.00401	mg/Kg			02/12/24 19:24	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**460**		49.8	mg/Kg			02/10/24 02:39	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		02/05/24 13:57	02/10/24 02:39	1
Diesel Range Organics (Over C10-C28)	**460**		49.8	mg/Kg		02/05/24 13:57	02/10/24 02:39	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		02/05/24 13:57	02/10/24 02:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*97*		*70 - 130*	*02/05/24 13:57*	*02/10/24 02:39*	*1*
o-Terphenyl	*105*		*70 - 130*	*02/05/24 13:57*	*02/10/24 02:39*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**84.0**		5.01	mg/Kg			02/06/24 16:53	1

Client Sample Results

Client: Vertex
Project/Site: JRU DI 2

Job ID: 890-6103-1
SDG: 23E - 06065

Client Sample ID: BH 24 - 06 0'

Lab Sample ID: 890-6103-6
Matrix: Solid
Date Collected: 02/01/24 10:20
Date Received: 02/01/24 16:26
Sample Depth: 0'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		02/12/24 08:41	02/12/24 19:44	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/12/24 08:41	02/12/24 19:44	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/12/24 08:41	02/12/24 19:44	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		02/12/24 08:41	02/12/24 19:44	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/12/24 08:41	02/12/24 19:44	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		02/12/24 08:41	02/12/24 19:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*	*02/12/24 08:41*	*02/12/24 19:44*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*02/12/24 08:41*	*02/12/24 19:44*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			02/12/24 19:44	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**76.0**		49.9		mg/Kg			02/10/24 03:01	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		02/05/24 13:57	02/10/24 03:01	1
Diesel Range Organics (Over C10-C28)	**76.0**		49.9		mg/Kg		02/05/24 13:57	02/10/24 03:01	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/05/24 13:57	02/10/24 03:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*02/05/24 13:57*	*02/10/24 03:01*	*1*
o-Terphenyl	*104*		*70 - 130*	*02/05/24 13:57*	*02/10/24 03:01*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**50.6**		4.99		mg/Kg			02/06/24 16:58	1

Client Sample ID: BH 24 - 06 1'

Lab Sample ID: 890-6103-7
Matrix: Solid
Date Collected: 02/01/24 10:30
Date Received: 02/01/24 16:26
Sample Depth: 1'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		02/12/24 08:41	02/12/24 20:05	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/12/24 08:41	02/12/24 20:05	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/12/24 08:41	02/12/24 20:05	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		02/12/24 08:41	02/12/24 20:05	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/12/24 08:41	02/12/24 20:05	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		02/12/24 08:41	02/12/24 20:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*130*		*70 - 130*	*02/12/24 08:41*	*02/12/24 20:05*	*1*

Eurofins Carlsbad

Client Sample Results

Client: Vertex
Project/Site: JRU DI 2

Job ID: 890-6103-1
SDG: 23E - 06065

Client Sample ID: BH 24 - 06 1'

Lab Sample ID: 890-6103-7
Matrix: Solid
Date Collected: 02/01/24 10:30
Date Received: 02/01/24 16:26
Sample Depth: 1'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*	*02/12/24 08:41*	*02/12/24 20:05*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			02/12/24 20:05	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**73.3**		49.6	mg/Kg			02/10/24 03:23	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.6	U	49.6	mg/Kg		02/05/24 13:57	02/10/24 03:23	1
Diesel Range Organics (Over C10-C28)	**73.3**		49.6	mg/Kg		02/05/24 13:57	02/10/24 03:23	1
OII Range Organics (Over C28-C36)	<49.6	U	49.6	mg/Kg		02/05/24 13:57	02/10/24 03:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*87*		*70 - 130*	*02/05/24 13:57*	*02/10/24 03:23*	*1*
o-Terphenyl	*95*		*70 - 130*	*02/05/24 13:57*	*02/10/24 03:23*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**54.0**		5.00	mg/Kg			02/06/24 17:02	1

Client Sample ID: BH 24 - 06 2'

Lab Sample ID: 890-6103-8
Matrix: Solid
Date Collected: 02/01/24 10:40
Date Received: 02/01/24 16:26
Sample Depth: 2'

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		02/12/24 08:41	02/12/24 20:26	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/12/24 08:41	02/12/24 20:26	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/12/24 08:41	02/12/24 20:26	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		02/12/24 08:41	02/12/24 20:26	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/12/24 08:41	02/12/24 20:26	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		02/12/24 08:41	02/12/24 20:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*121*		*70 - 130*	*02/12/24 08:41*	*02/12/24 20:26*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*02/12/24 08:41*	*02/12/24 20:26*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			02/12/24 20:26	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**87.2**		50.1	mg/Kg			02/10/24 03:46	1

Eurofins Carlsbad

Client Sample Results

Client: Vertex
Project/Site: JRU DI 2

Job ID: 890-6103-1
SDG: 23E - 06065

Client Sample ID: BH 24 - 06 2'

Lab Sample ID: 890-6103-8
Matrix: Solid
Date Collected: 02/01/24 10:40
Date Received: 02/01/24 16:26
Sample Depth: 2'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.1	U	50.1		mg/Kg		02/05/24 13:57	02/10/24 03:46	1
Diesel Range Organics (Over C10-C28)	**87.2**		50.1		mg/Kg		02/05/24 13:57	02/10/24 03:46	1
OII Range Organics (Over C28-C36)	<50.1	U	50.1		mg/Kg		02/05/24 13:57	02/10/24 03:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*100*		*70 - 130*	*02/05/24 13:57*	*02/10/24 03:46*	*1*
o-Terphenyl	*109*		*70 - 130*	*02/05/24 13:57*	*02/10/24 03:46*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**114**		5.05		mg/Kg			02/06/24 17:07	1

Client Sample ID: BH 24 - 07 0'

Lab Sample ID: 890-6103-9
Matrix: Solid
Date Collected: 02/01/24 10:50
Date Received: 02/01/24 16:26
Sample Depth: 0'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		02/12/24 08:41	02/12/24 20:46	1
Toluene	<0.00201	U	0.00201		mg/Kg		02/12/24 08:41	02/12/24 20:46	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		02/12/24 08:41	02/12/24 20:46	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		02/12/24 08:41	02/12/24 20:46	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		02/12/24 08:41	02/12/24 20:46	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		02/12/24 08:41	02/12/24 20:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*127*		*70 - 130*	*02/12/24 08:41*	*02/12/24 20:46*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*02/12/24 08:41*	*02/12/24 20:46*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			02/12/24 20:46	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**161**		50.4		mg/Kg			02/10/24 04:08	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.4	U	50.4		mg/Kg		02/05/24 13:57	02/10/24 04:08	1
Diesel Range Organics (Over C10-C28)	**161**		50.4		mg/Kg		02/05/24 13:57	02/10/24 04:08	1
OII Range Organics (Over C28-C36)	<50.4	U	50.4		mg/Kg		02/05/24 13:57	02/10/24 04:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*89*		*70 - 130*	*02/05/24 13:57*	*02/10/24 04:08*	*1*
o-Terphenyl	*96*		*70 - 130*	*02/05/24 13:57*	*02/10/24 04:08*	*1*

Client Sample Results

Client: Vertex
Project/Site: JRU DI 2

Job ID: 890-6103-1
SDG: 23E - 06065

Client Sample ID: BH 24 - 07 0'

Lab Sample ID: 890-6103-9
Matrix: Solid
Date Collected: 02/01/24 10:50
Date Received: 02/01/24 16:26
Sample Depth: 0'

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**107**		5.02		mg/Kg			02/06/24 17:11	1

Client Sample ID: BH 24 - 07 1'

Lab Sample ID: 890-6103-10
Matrix: Solid
Date Collected: 02/01/24 11:00
Date Received: 02/01/24 16:26
Sample Depth: 1'

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/12/24 08:41	02/12/24 21:07	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/12/24 08:41	02/12/24 21:07	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/12/24 08:41	02/12/24 21:07	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		02/12/24 08:41	02/12/24 21:07	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/12/24 08:41	02/12/24 21:07	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		02/12/24 08:41	02/12/24 21:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*133*	*S1+*	*70 - 130*	*02/12/24 08:41*	*02/12/24 21:07*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*02/12/24 08:41*	*02/12/24 21:07*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			02/12/24 21:07	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**60.7**		50.5		mg/Kg			02/10/24 04:30	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.5	U	50.5		mg/Kg		02/05/24 13:57	02/10/24 04:30	1
Diesel Range Organics (Over C10-C28)	**60.7**		50.5		mg/Kg		02/05/24 13:57	02/10/24 04:30	1
OII Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		02/05/24 13:57	02/10/24 04:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*86*		*70 - 130*	*02/05/24 13:57*	*02/10/24 04:30*	*1*
o-Terphenyl	*93*		*70 - 130*	*02/05/24 13:57*	*02/10/24 04:30*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**110**		5.04		mg/Kg			02/06/24 17:16	1

Surrogate Summary

Client: Vertex
Project/Site: JRU DI 2

Job ID: 890-6103-1
SDG: 23E - 06065

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-39168-A-21-G MS	Matrix Spike	127	107
880-39168-A-21-H MSD	Matrix Spike Duplicate	108	105
890-6103-1	BH 24 - 04 0'	106	95
890-6103-2	BH 24 - 04 1'	106	100
890-6103-3	BH 24 - 05 0'	90	71
890-6103-4	BH 24 - 05 1'	76	55 S1-
890-6103-5	BH 24 - 05 2'	112	100
890-6103-6	BH 24 - 06 0'	118	100
890-6103-7	BH 24 - 06 1'	130	106
890-6103-8	BH 24 - 06 2'	121	105
890-6103-9	BH 24 - 07 0'	127	100
890-6103-10	BH 24 - 07 1'	133 S1+	103
LCS 880-72837/1-A	Lab Control Sample	98	100
LCSD 880-72837/2-A	Lab Control Sample Dup	110	103
MB 880-72837/5-A	Method Blank	118	122

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-38850-A-3-C MS	Matrix Spike	89	91
880-38850-A-3-D MSD	Matrix Spike Duplicate	76	75
890-6103-1	BH 24 - 04 0'	93	95
890-6103-2	BH 24 - 04 1'	98	106
890-6103-3	BH 24 - 05 0'	102	90
890-6103-4	BH 24 - 05 1'	116	101
890-6103-5	BH 24 - 05 2'	97	105
890-6103-6	BH 24 - 06 0'	96	104
890-6103-7	BH 24 - 06 1'	87	95
890-6103-8	BH 24 - 06 2'	100	109
890-6103-9	BH 24 - 07 0'	89	96
890-6103-10	BH 24 - 07 1'	86	93
LCS 880-72387/2-A	Lab Control Sample	111	110
LCSD 880-72387/3-A	Lab Control Sample Dup	106	105
MB 880-72387/1-A	Method Blank	134 S1+	147 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Vertex
Project/Site: JRU DI 2

Job ID: 890-6103-1
SDG: 23E - 06065

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-72837/5-A
Matrix: Solid
Analysis Batch: 72835

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 72837

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/12/24 08:41	02/12/24 13:20	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/12/24 08:41	02/12/24 13:20	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/12/24 08:41	02/12/24 13:20	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/12/24 08:41	02/12/24 13:20	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/12/24 08:41	02/12/24 13:20	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/12/24 08:41	02/12/24 13:20	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*	*02/12/24 08:41*	*02/12/24 13:20*	*1*
1,4-Difluorobenzene (Surr)	*122*		*70 - 130*	*02/12/24 08:41*	*02/12/24 13:20*	*1*

Lab Sample ID: LCS 880-72837/1-A
Matrix: Solid
Analysis Batch: 72835

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 72837

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1022		mg/Kg		102	70 - 130		
Toluene			0.100	0.09751		mg/Kg		98	70 - 130		
Ethylbenzene			0.100	0.09641		mg/Kg		96	70 - 130		
m-Xylene & p-Xylene			0.200	0.2046		mg/Kg		102	70 - 130		
o-Xylene			0.100	0.08885		mg/Kg		89	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: LCSD 880-72837/2-A
Matrix: Solid
Analysis Batch: 72835

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 72837

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1018		mg/Kg		102	70 - 130	0	35
Toluene			0.100	0.09975		mg/Kg		100	70 - 130	2	35
Ethylbenzene			0.100	0.1038		mg/Kg		104	70 - 130	7	35
m-Xylene & p-Xylene			0.200	0.2201		mg/Kg		110	70 - 130	7	35
o-Xylene			0.100	0.09405		mg/Kg		94	70 - 130	6	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: 880-39168-A-21-G MS
Matrix: Solid
Analysis Batch: 72835

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 72837

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00200	U F1 F2	0.0996	0.01959	F1	mg/Kg		20	70 - 130		
Toluene	<0.00200	U F1 F2	0.0996	0.01674	F1	mg/Kg		17	70 - 130		

QC Sample Results

Client: Vertex
Project/Site: JRU DI 2

Job ID: 890-6103-1
SDG: 23E - 06065

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

Lab Sample ID: 880-39168-A-21-G MS
Matrix: Solid
Analysis Batch: 72835

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 72837

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00200	U F1 F2	0.0996	0.01652	F1	mg/Kg		17	70 - 130
m-Xylene & p-Xylene	<0.00401	U F1 F2	0.199	0.03896	F1	mg/Kg		20	70 - 130
o-Xylene	<0.00200	U F1 F2	0.0996	0.02330	F1	mg/Kg		23	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*127*		*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

Lab Sample ID: 880-39168-A-21-H MSD
Matrix: Solid
Analysis Batch: 72835

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 72837

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U F1 F2	0.0990	0.09368	F2	mg/Kg		95	70 - 130	131	35
Toluene	<0.00200	U F1 F2	0.0990	0.08793	F2	mg/Kg		89	70 - 130	136	35
Ethylbenzene	<0.00200	U F1 F2	0.0990	0.08776	F2	mg/Kg		89	70 - 130	137	35
m-Xylene & p-Xylene	<0.00401	U F1 F2	0.198	0.1949	F2	mg/Kg		98	70 - 130	133	35
o-Xylene	<0.00200	U F1 F2	0.0990	0.08558	F2	mg/Kg		86	70 - 130	114	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

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

Lab Sample ID: MB 880-72387/1-A
Matrix: Solid
Analysis Batch: 72694

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 72387

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/05/24 13:57	02/09/24 19:17	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/05/24 13:57	02/09/24 19:17	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/05/24 13:57	02/09/24 19:17	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*134*	*S1+*	*70 - 130*	*02/05/24 13:57*	*02/09/24 19:17*	*1*
o-Terphenyl	*147*	*S1+*	*70 - 130*	*02/05/24 13:57*	*02/09/24 19:17*	*1*

Lab Sample ID: LCS 880-72387/2-A
Matrix: Solid
Analysis Batch: 72694

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 72387

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	939.3		mg/Kg		94	70 - 130
Diesel Range Organics (Over C10-C28)			1000	1003		mg/Kg		100	70 - 130

QC Sample Results

Client: Vertex
Project/Site: JRU DI 2

Job ID: 890-6103-1
SDG: 23E - 06065

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

Lab Sample ID: LCS 880-72387/2-A
Matrix: Solid
Analysis Batch: 72694

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 72387

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	111		70 - 130
o-Terphenyl	110		70 - 130

Lab Sample ID: LCSD 880-72387/3-A
Matrix: Solid
Analysis Batch: 72694

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 72387

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	925.7		mg/Kg		93	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	990.6		mg/Kg		99	70 - 130	1	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	106		70 - 130
o-Terphenyl	105		70 - 130

Lab Sample ID: 880-38850-A-3-C MS
Matrix: Solid
Analysis Batch: 72694

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 72387

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.4	U	991	1094		mg/Kg		106	70 - 130
Diesel Range Organics (Over C10-C28)	<50.4	U F1	991	724.3		mg/Kg		70	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	89		70 - 130
o-Terphenyl	91		70 - 130

Lab Sample ID: 880-38850-A-3-D MSD
Matrix: Solid
Analysis Batch: 72694

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 72387

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.4	U	991	956.8		mg/Kg		92	70 - 130	13	20
Diesel Range Organics (Over C10-C28)	<50.4	U F1	991	609.7	F1	mg/Kg		59	70 - 130	17	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	76		70 - 130
o-Terphenyl	75		70 - 130

QC Sample Results

Client: Vertex
Project/Site: JRU DI 2

Job ID: 890-6103-1
SDG: 23E - 06065

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-72306/1-A
Matrix: Solid
Analysis Batch: 72468

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			02/06/24 15:01	1

Lab Sample ID: LCS 880-72306/2-A
Matrix: Solid
Analysis Batch: 72468

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	236.8		mg/Kg		95	90 - 110		

Lab Sample ID: LCSD 880-72306/3-A
Matrix: Solid
Analysis Batch: 72468

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	237.2		mg/Kg		95	90 - 110	0	20

Lab Sample ID: 890-6103-2 MS
Matrix: Solid
Analysis Batch: 72468

Client Sample ID: BH 24 - 04 1'
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	114		253	363.2		mg/Kg		99	90 - 110		

Lab Sample ID: 890-6103-2 MSD
Matrix: Solid
Analysis Batch: 72468

Client Sample ID: BH 24 - 04 1'
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	114		253	365.3		mg/Kg		99	90 - 110	1	20

QC Association Summary

Client: Vertex
Project/Site: JRU DI 2

Job ID: 890-6103-1
SDG: 23E - 06065

GC VOA

Analysis Batch: 72835

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6103-1	BH 24 - 04 0'	Total/NA	Solid	8021B	72837
890-6103-2	BH 24 - 04 1'	Total/NA	Solid	8021B	72837
890-6103-3	BH 24 - 05 0'	Total/NA	Solid	8021B	72837
890-6103-4	BH 24 - 05 1'	Total/NA	Solid	8021B	72837
890-6103-5	BH 24 - 05 2'	Total/NA	Solid	8021B	72837
890-6103-6	BH 24 - 06 0'	Total/NA	Solid	8021B	72837
890-6103-7	BH 24 - 06 1'	Total/NA	Solid	8021B	72837
890-6103-8	BH 24 - 06 2'	Total/NA	Solid	8021B	72837
890-6103-9	BH 24 - 07 0'	Total/NA	Solid	8021B	72837
890-6103-10	BH 24 - 07 1'	Total/NA	Solid	8021B	72837
MB 880-72837/5-A	Method Blank	Total/NA	Solid	8021B	72837
LCS 880-72837/1-A	Lab Control Sample	Total/NA	Solid	8021B	72837
LCSD 880-72837/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	72837
880-39168-A-21-G MS	Matrix Spike	Total/NA	Solid	8021B	72837
880-39168-A-21-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	72837

Prep Batch: 72837

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6103-1	BH 24 - 04 0'	Total/NA	Solid	5035	
890-6103-2	BH 24 - 04 1'	Total/NA	Solid	5035	
890-6103-3	BH 24 - 05 0'	Total/NA	Solid	5035	
890-6103-4	BH 24 - 05 1'	Total/NA	Solid	5035	
890-6103-5	BH 24 - 05 2'	Total/NA	Solid	5035	
890-6103-6	BH 24 - 06 0'	Total/NA	Solid	5035	
890-6103-7	BH 24 - 06 1'	Total/NA	Solid	5035	
890-6103-8	BH 24 - 06 2'	Total/NA	Solid	5035	
890-6103-9	BH 24 - 07 0'	Total/NA	Solid	5035	
890-6103-10	BH 24 - 07 1'	Total/NA	Solid	5035	
MB 880-72837/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-72837/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-72837/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-39168-A-21-G MS	Matrix Spike	Total/NA	Solid	5035	
880-39168-A-21-H MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 72990

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6103-1	BH 24 - 04 0'	Total/NA	Solid	Total BTEX	
890-6103-2	BH 24 - 04 1'	Total/NA	Solid	Total BTEX	
890-6103-3	BH 24 - 05 0'	Total/NA	Solid	Total BTEX	
890-6103-4	BH 24 - 05 1'	Total/NA	Solid	Total BTEX	
890-6103-5	BH 24 - 05 2'	Total/NA	Solid	Total BTEX	
890-6103-6	BH 24 - 06 0'	Total/NA	Solid	Total BTEX	
890-6103-7	BH 24 - 06 1'	Total/NA	Solid	Total BTEX	
890-6103-8	BH 24 - 06 2'	Total/NA	Solid	Total BTEX	
890-6103-9	BH 24 - 07 0'	Total/NA	Solid	Total BTEX	
890-6103-10	BH 24 - 07 1'	Total/NA	Solid	Total BTEX	

QC Association Summary

Client: Vertex
Project/Site: JRU DI 2

Job ID: 890-6103-1
SDG: 23E - 06065

GC Semi VOA

Prep Batch: 72387

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6103-1	BH 24 - 04 0'	Total/NA	Solid	8015NM Prep	
890-6103-2	BH 24 - 04 1'	Total/NA	Solid	8015NM Prep	
890-6103-3	BH 24 - 05 0'	Total/NA	Solid	8015NM Prep	
890-6103-4	BH 24 - 05 1'	Total/NA	Solid	8015NM Prep	
890-6103-5	BH 24 - 05 2'	Total/NA	Solid	8015NM Prep	
890-6103-6	BH 24 - 06 0'	Total/NA	Solid	8015NM Prep	
890-6103-7	BH 24 - 06 1'	Total/NA	Solid	8015NM Prep	
890-6103-8	BH 24 - 06 2'	Total/NA	Solid	8015NM Prep	
890-6103-9	BH 24 - 07 0'	Total/NA	Solid	8015NM Prep	
890-6103-10	BH 24 - 07 1'	Total/NA	Solid	8015NM Prep	
MB 880-72387/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-72387/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-72387/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-38850-A-3-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-38850-A-3-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 72694

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6103-1	BH 24 - 04 0'	Total/NA	Solid	8015B NM	72387
890-6103-2	BH 24 - 04 1'	Total/NA	Solid	8015B NM	72387
890-6103-3	BH 24 - 05 0'	Total/NA	Solid	8015B NM	72387
890-6103-4	BH 24 - 05 1'	Total/NA	Solid	8015B NM	72387
890-6103-5	BH 24 - 05 2'	Total/NA	Solid	8015B NM	72387
890-6103-6	BH 24 - 06 0'	Total/NA	Solid	8015B NM	72387
890-6103-7	BH 24 - 06 1'	Total/NA	Solid	8015B NM	72387
890-6103-8	BH 24 - 06 2'	Total/NA	Solid	8015B NM	72387
890-6103-9	BH 24 - 07 0'	Total/NA	Solid	8015B NM	72387
890-6103-10	BH 24 - 07 1'	Total/NA	Solid	8015B NM	72387
MB 880-72387/1-A	Method Blank	Total/NA	Solid	8015B NM	72387
LCS 880-72387/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	72387
LCSD 880-72387/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	72387
880-38850-A-3-C MS	Matrix Spike	Total/NA	Solid	8015B NM	72387
880-38850-A-3-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	72387

Analysis Batch: 72968

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6103-1	BH 24 - 04 0'	Total/NA	Solid	8015 NM	
890-6103-2	BH 24 - 04 1'	Total/NA	Solid	8015 NM	
890-6103-3	BH 24 - 05 0'	Total/NA	Solid	8015 NM	
890-6103-4	BH 24 - 05 1'	Total/NA	Solid	8015 NM	
890-6103-5	BH 24 - 05 2'	Total/NA	Solid	8015 NM	
890-6103-6	BH 24 - 06 0'	Total/NA	Solid	8015 NM	
890-6103-7	BH 24 - 06 1'	Total/NA	Solid	8015 NM	
890-6103-8	BH 24 - 06 2'	Total/NA	Solid	8015 NM	
890-6103-9	BH 24 - 07 0'	Total/NA	Solid	8015 NM	
890-6103-10	BH 24 - 07 1'	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Vertex
Project/Site: JRU DI 2

Job ID: 890-6103-1
SDG: 23E - 06065

HPLC/IC

Leach Batch: 72306

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6103-1	BH 24 - 04 0'	Soluble	Solid	DI Leach	
890-6103-2	BH 24 - 04 1'	Soluble	Solid	DI Leach	
890-6103-3	BH 24 - 05 0'	Soluble	Solid	DI Leach	
890-6103-4	BH 24 - 05 1'	Soluble	Solid	DI Leach	
890-6103-5	BH 24 - 05 2'	Soluble	Solid	DI Leach	
890-6103-6	BH 24 - 06 0'	Soluble	Solid	DI Leach	
890-6103-7	BH 24 - 06 1'	Soluble	Solid	DI Leach	
890-6103-8	BH 24 - 06 2'	Soluble	Solid	DI Leach	
890-6103-9	BH 24 - 07 0'	Soluble	Solid	DI Leach	
890-6103-10	BH 24 - 07 1'	Soluble	Solid	DI Leach	
MB 880-72306/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-72306/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-72306/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-6103-2 MS	BH 24 - 04 1'	Soluble	Solid	DI Leach	
890-6103-2 MSD	BH 24 - 04 1'	Soluble	Solid	DI Leach	

Analysis Batch: 72468

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6103-1	BH 24 - 04 0'	Soluble	Solid	300.0	72306
890-6103-2	BH 24 - 04 1'	Soluble	Solid	300.0	72306
890-6103-3	BH 24 - 05 0'	Soluble	Solid	300.0	72306
890-6103-4	BH 24 - 05 1'	Soluble	Solid	300.0	72306
890-6103-5	BH 24 - 05 2'	Soluble	Solid	300.0	72306
890-6103-6	BH 24 - 06 0'	Soluble	Solid	300.0	72306
890-6103-7	BH 24 - 06 1'	Soluble	Solid	300.0	72306
890-6103-8	BH 24 - 06 2'	Soluble	Solid	300.0	72306
890-6103-9	BH 24 - 07 0'	Soluble	Solid	300.0	72306
890-6103-10	BH 24 - 07 1'	Soluble	Solid	300.0	72306
MB 880-72306/1-A	Method Blank	Soluble	Solid	300.0	72306
LCS 880-72306/2-A	Lab Control Sample	Soluble	Solid	300.0	72306
LCSD 880-72306/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	72306
890-6103-2 MS	BH 24 - 04 1'	Soluble	Solid	300.0	72306
890-6103-2 MSD	BH 24 - 04 1'	Soluble	Solid	300.0	72306

Lab Chronicle

Client: Vertex
Project/Site: JRU DI 2

Job ID: 890-6103-1
SDG: 23E - 06065

Client Sample ID: BH 24 - 04 0'

Lab Sample ID: 890-6103-1
Matrix: Solid
Date Collected: 02/01/24 09:30
Date Received: 02/01/24 16:26

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	72837	02/12/24 08:41	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72835	02/12/24 18:43	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72990	02/12/24 18:43	SM	EET MID
Total/NA	Analysis	8015 NM		1			72968	02/10/24 01:11	SM	EET MID
Total/NA	Prep	8015NM Prep			9.98 g	10 mL	72387	02/05/24 13:57	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	72694	02/10/24 01:11	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	72306	02/04/24 12:45	CH	EET MID
Soluble	Analysis	300.0		1			72468	02/06/24 16:16	CH	EET MID

Client Sample ID: BH 24 - 04 1'

Lab Sample ID: 890-6103-2
Matrix: Solid
Date Collected: 02/01/24 09:40
Date Received: 02/01/24 16:26

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	72837	02/12/24 08:41	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72835	02/12/24 19:03	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72990	02/12/24 19:03	SM	EET MID
Total/NA	Analysis	8015 NM		1			72968	02/10/24 01:33	SM	EET MID
Total/NA	Prep	8015NM Prep			9.92 g	10 mL	72387	02/05/24 13:57	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	72694	02/10/24 01:33	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	72306	02/04/24 12:45	CH	EET MID
Soluble	Analysis	300.0		1			72468	02/06/24 16:20	CH	EET MID

Client Sample ID: BH 24 - 05 0'

Lab Sample ID: 890-6103-3
Matrix: Solid
Date Collected: 02/01/24 09:50
Date Received: 02/01/24 16:26

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	72837	02/12/24 08:41	MNR	EET MID
Total/NA	Analysis	8021B		25	5 mL	5 mL	72835	02/12/24 21:27	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72990	02/12/24 21:27	SM	EET MID
Total/NA	Analysis	8015 NM		1			72968	02/10/24 01:55	SM	EET MID
Total/NA	Prep	8015NM Prep			9.90 g	10 mL	72387	02/05/24 13:57	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	72694	02/10/24 01:55	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	72306	02/04/24 12:45	CH	EET MID
Soluble	Analysis	300.0		1			72468	02/06/24 16:34	CH	EET MID

Client Sample ID: BH 24 - 05 1'

Lab Sample ID: 890-6103-4
Matrix: Solid
Date Collected: 02/01/24 10:00
Date Received: 02/01/24 16:26

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	72837	02/12/24 08:41	MNR	EET MID
Total/NA	Analysis	8021B		25	5 mL	5 mL	72835	02/12/24 21:48	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72990	02/12/24 21:48	SM	EET MID

Lab Chronicle

Client: Vertex
Project/Site: JRU DI 2

Job ID: 890-6103-1
SDG: 23E - 06065

Client Sample ID: BH 24 - 05 1'

Lab Sample ID: 890-6103-4

Date Collected: 02/01/24 10:00
Matrix: Solid
Date Received: 02/01/24 16:26

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			72968	02/10/24 02:17	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	72387	02/05/24 13:57	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	72694	02/10/24 02:17	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	72306	02/04/24 12:45	CH	EET MID
Soluble	Analysis	300.0		1			72468	02/06/24 16:39	CH	EET MID

Client Sample ID: BH 24 - 05 2'

Lab Sample ID: 890-6103-5

Date Collected: 02/01/24 10:10
Matrix: Solid
Date Received: 02/01/24 16:26

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	72837	02/12/24 08:41	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72835	02/12/24 19:24	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72990	02/12/24 19:24	SM	EET MID
Total/NA	Analysis	8015 NM		1			72968	02/10/24 02:39	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	72387	02/05/24 13:57	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	72694	02/10/24 02:39	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	72306	02/04/24 12:45	CH	EET MID
Soluble	Analysis	300.0		1			72468	02/06/24 16:53	CH	EET MID

Client Sample ID: BH 24 - 06 0'

Lab Sample ID: 890-6103-6

Date Collected: 02/01/24 10:20
Matrix: Solid
Date Received: 02/01/24 16:26

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	72837	02/12/24 08:41	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72835	02/12/24 19:44	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72990	02/12/24 19:44	SM	EET MID
Total/NA	Analysis	8015 NM		1			72968	02/10/24 03:01	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	72387	02/05/24 13:57	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	72694	02/10/24 03:01	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	72306	02/04/24 12:45	CH	EET MID
Soluble	Analysis	300.0		1			72468	02/06/24 16:58	CH	EET MID

Client Sample ID: BH 24 - 06 1'

Lab Sample ID: 890-6103-7

Date Collected: 02/01/24 10:30
Matrix: Solid
Date Received: 02/01/24 16:26

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	72837	02/12/24 08:41	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72835	02/12/24 20:05	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72990	02/12/24 20:05	SM	EET MID
Total/NA	Analysis	8015 NM		1			72968	02/10/24 03:23	SM	EET MID
Total/NA	Prep	8015NM Prep			10.09 g	10 mL	72387	02/05/24 13:57	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	72694	02/10/24 03:23	SM	EET MID

Lab Chronicle

Client: Vertex
Project/Site: JRU DI 2

Job ID: 890-6103-1
SDG: 23E - 06065

Client Sample ID: BH 24 - 06 1'

Lab Sample ID: 890-6103-7
Matrix: Solid
Date Collected: 02/01/24 10:30
Date Received: 02/01/24 16:26

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.00 g	50 mL	72306	02/04/24 12:45	CH	EET MID
Soluble	Analysis	300.0		1			72468	02/06/24 17:02	CH	EET MID

Client Sample ID: BH 24 - 06 2'

Lab Sample ID: 890-6103-8
Matrix: Solid
Date Collected: 02/01/24 10:40
Date Received: 02/01/24 16:26

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	72837	02/12/24 08:41	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72835	02/12/24 20:26	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72990	02/12/24 20:26	SM	EET MID
Total/NA	Analysis	8015 NM		1			72968	02/10/24 03:46	SM	EET MID
Total/NA	Prep	8015NM Prep			9.98 g	10 mL	72387	02/05/24 13:57	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	72694	02/10/24 03:46	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	72306	02/04/24 12:45	CH	EET MID
Soluble	Analysis	300.0		1			72468	02/06/24 17:07	CH	EET MID

Client Sample ID: BH 24 - 07 0'

Lab Sample ID: 890-6103-9
Matrix: Solid
Date Collected: 02/01/24 10:50
Date Received: 02/01/24 16:26

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	72837	02/12/24 08:41	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72835	02/12/24 20:46	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72990	02/12/24 20:46	SM	EET MID
Total/NA	Analysis	8015 NM		1			72968	02/10/24 04:08	SM	EET MID
Total/NA	Prep	8015NM Prep			9.92 g	10 mL	72387	02/05/24 13:57	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	72694	02/10/24 04:08	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	72306	02/04/24 12:45	CH	EET MID
Soluble	Analysis	300.0		1			72468	02/06/24 17:11	CH	EET MID

Client Sample ID: BH 24 - 07 1'

Lab Sample ID: 890-6103-10
Matrix: Solid
Date Collected: 02/01/24 11:00
Date Received: 02/01/24 16:26

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	72837	02/12/24 08:41	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72835	02/12/24 21:07	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72990	02/12/24 21:07	SM	EET MID
Total/NA	Analysis	8015 NM		1			72968	02/10/24 04:30	SM	EET MID
Total/NA	Prep	8015NM Prep			9.90 g	10 mL	72387	02/05/24 13:57	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	72694	02/10/24 04:30	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	72306	02/04/24 12:45	CH	EET MID
Soluble	Analysis	300.0		1			72468	02/06/24 17:16	CH	EET MID

Lab Chronicle

Client: Vertex
Project/Site: JRU DI 2

Job ID: 890-6103-1
SDG: 23E - 06065

Laboratory References:

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

Accreditation/Certification Summary

Client: Vertex
Project/Site: JRU DI 2

Job ID: 890-6103-1
SDG: 23E - 06065

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24

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

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

Method Summary

Client: Vertex
Project/Site: JRU DI 2

Job ID: 890-6103-1
SDG: 23E - 06065

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

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Vertex
Project/Site: JRU DI 2

Job ID: 890-6103-1
SDG: 23E - 06065

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-6103-1	BH 24 - 04 0'	Solid	02/01/24 09:30	02/01/24 16:26	0'
890-6103-2	BH 24 - 04 1'	Solid	02/01/24 09:40	02/01/24 16:26	1'
890-6103-3	BH 24 - 05 0'	Solid	02/01/24 09:50	02/01/24 16:26	0'
890-6103-4	BH 24 - 05 1'	Solid	02/01/24 10:00	02/01/24 16:26	1'
890-6103-5	BH 24 - 05 2'	Solid	02/01/24 10:10	02/01/24 16:26	2'
890-6103-6	BH 24 - 06 0'	Solid	02/01/24 10:20	02/01/24 16:26	0'
890-6103-7	BH 24 - 06 1'	Solid	02/01/24 10:30	02/01/24 16:26	1'
890-6103-8	BH 24 - 06 2'	Solid	02/01/24 10:40	02/01/24 16:26	2'
890-6103-9	BH 24 - 07 0'	Solid	02/01/24 10:50	02/01/24 16:26	0'
890-6103-10	BH 24 - 07 1'	Solid	02/01/24 11:00	02/01/24 16:26	1'

nAPP2333213?

eurofins | Environment Testing Xenco

Chain of Custody

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

Work Order No: 6103

www.xenco.com Page 1 of 1

Project Manager:	Clance Dixon	Bill to: (if different)	Garrett Green
Company Name:	Vertex/XTO	Company Name:	XTO
Address:		Address:	575 200 0729
City, State ZIP:	on file	City, State ZIP:	
Phone:		Email:	

Work Order Comments

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

Project Name:	JRU DI 2	Turn Around	☑ Routine ☐ Rush
Project Number:	23E-06065	Due Date:	
Project Location:	JRU DI 2	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Jeusavan Costa		
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes (circled) No	Wet Ice:	Yes No
Samples Received Intact:	Yes (circled) No	Thermometer ID:	TNM007
Cooler Custody Seals:	Yes No N/A (circled)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A (circled)	Temperature Reading:	0.2
Total Containers:		Corrected Temperature:	0

ANALYSIS REQUEST — Parameters: BTEX (8021), TPH 8015D

Sample Identification		Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	BTEX (8021)	TPH 8015D
BH24_04	0'	Soil	02.01.24	9:30	0		1	↓	↓
BH24_04	1'	↓	↓	9:40	1	↓	↓	↓	↓
BH24_05	0'	↓	↓	9:50	0	↓	↓	↓	↓
BH24_05	1'	↓	↓	10:00	1	↓	↓	↓	↓
BH24_05	2'	↓	↓	10:10	2	↓	↓	↓	↓
BH24_06	0'	↓	↓	10:20	0	↓	↓	↓	↓
BH24_06	1'	↓	↓	10:30	1	↓	↓	↓	↓
BH24_06	2'	↓	↓	10:40	2	↓	↓	↓	↓
BH24_07	0'	↓	↓	10:50	0	↓	↓	↓	↓
BH24_07	1'	↓	↓	11:00	1	↓	10	↓	↓

Preservative Codes

None: NO — DI Water: H_2O
Cool: Cool — MeOH: Me
HCL: HC — HNO_3: HN
H_2SO_4: H_2 — NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: NaSO3
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Sample Comments

Total 200.7 / 6010 — 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn

Circle Method(s) and Metal(s) to be analyzed — TCLP / SPLP 6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 [signature]	[signature] Burns	2/1 1626	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Vertex

Job Number: 890-6103-1
SDG Number: 23E - 06065

Login Number: 6103
List Number: 1
Creator: Bruns, Shannon

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Vertex

Job Number: 890-6103-1
SDG Number: 23E - 06065

Login Number: 6103
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 02/05/24 08:29 AM

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

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Chance Dixon
Vertex
3101 Boyd Dr
Carlsbad, New Mexico 88220

Generated 2/19/2024 4:20:41 PM

JOB DESCRIPTION

JRU D1 2
23E-06065

JOB NUMBER

890-6109-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

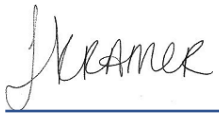
Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

Authorization



Generated
2/19/2024 4:20:41 PM

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

Client: Vertex
Project/Site: JRU D1 2

Laboratory Job ID: 890-6109-1
SDG: 23E-06065

Table of Contents

Definitions/Glossary

Client: Vertex
Project/Site: JRU D1 2

Job ID: 890-6109-1
SDG: 23E-06065

Qualifiers

GC VOA

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.
E	Result exceeded calibration range.
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.

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Definitions/Glossary

Client: Vertex
Project/Site: JRU D1 2

Job ID: 890-6109-1
SDG: 23E-06065

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
TNTC	Too Numerous To Count

Case Narrative

Client: Vertex
Project: JRU D1 2

Job ID: 890-6109-1

Job ID: 890-6109-1 Eurofins Carlsbad

Job Narrative
890-6109-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 2/5/2024 10:15 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 -1.2°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: BH24-08 0 (890-6109-1), BH24-08 1 (890-6109-2), BH24-09 0 (890-6109-3), BH24-09 1 (890-6109-4), BH24-09 2 (890-6109-5), BH24-10 0 (890-6109-6), BH24-10 1 (890-6109-7), BH24-11 0 (890-6109-8), BH24-11 1 (890-6109-9) and BH24-11 2 (890-6109-10).

GC VOA
Method 8021B: Surrogate recovery for the following samples were outside control limits: BH24-08 0 (890-6109-1), BH24-08 1 (890-6109-2), BH24-09 0 (890-6109-3), BH24-09 1 (890-6109-4), BH24-09 2 (890-6109-5), BH24-10 0 (890-6109-6), BH24-10 1 (890-6109-7), BH24-11 0 (890-6109-8), BH24-11 1 (890-6109-9), BH24-11 2 (890-6109-10), (890-6109-A-1-C MS) and (890-6109-A-1-D MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following samples were outside control limits: (LCS 880-73078/1-A) and (LCSD 880-73078/2-A). Evidence of matrix interferences is not obvious.

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-73249 recovered above the upper control limit for m-Xylene & p-Xylene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (CCV 880-73249/20).

Method 8021B: The native sample, matrix spike, and matrix spike duplicate (MS/MSD) associated with preparation batch 880-73078 and analytical batch 880-73249 were performed at the same dilution. Due to the additional level of analyte present in the spiked samples, the concentration of Toluene, Ethylbenzene, m-Xylene & p-Xylene, o-Xylene and Xylenes, Total in the MS/MSD was above the instrument calibration range. The data have been reported and qualified.

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-73334 and analytical batch 880-73252 was outside the upper control limits.

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

GC Semi VOA
Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-72531 and analytical batch 880-72814 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: BH24-08 0 (890-6109-1), (890-6096-A-2-B), (890-6096-A-2-C MS) and (890-6096-A-2-D MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The method blank for preparation batch 880-72531 and analytical batch 880-72814 contained Gasoline Range Organics (GRO)-C6-C10 above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8015MOD_NM: Spike compounds were inadvertently omitted during the extraction process for the matrix spike/matrix

Case Narrative

Client: Vertex Job ID: 890-6109-1
Project: JRU D1 2

Job ID: 890-6109-1 (Continued) Eurofins Carlsbad

spike duplicate (MS/MSD); therefore, matrix spike recoveries are unavailable for preparation batch 880-72531 and analytical batch 880-72814. The associated laboratory control sample (LCS) met acceptance criteria.

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

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

Client Sample Results

Client: Vertex
Project/Site: JRU D1 2

Job ID: 890-6109-1
SDG: 23E-06065

Client Sample ID: BH24-08 0

Lab Sample ID: 890-6109-1
Matrix: Solid
Date Collected: 02/02/24 09:30
Date Received: 02/05/24 10:15
Sample Depth: 0

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U F1 F2	0.00200		mg/Kg		02/13/24 15:52	02/16/24 05:36	1
Toluene	**0.383**	**F1 F2**	0.00200		mg/Kg		02/13/24 15:52	02/16/24 05:36	1
Ethylbenzene	**0.334**	**F1 F2**	0.00200		mg/Kg		02/13/24 15:52	02/16/24 05:36	1
m-Xylene & p-Xylene	**1.30**		0.0806		mg/Kg		02/16/24 10:47	02/16/24 21:46	20
o-Xylene	**0.718**		0.0403		mg/Kg		02/16/24 10:47	02/16/24 21:46	20
Xylenes, Total	**2.02**		0.0806		mg/Kg		02/16/24 10:47	02/16/24 21:46	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*328*	*S1+*	*70 - 130*	*02/13/24 15:52*	*02/16/24 05:36*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*02/13/24 15:52*	*02/16/24 05:36*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**2.74**		0.0806		mg/Kg			02/16/24 21:46	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**5900**		50.2		mg/Kg			02/11/24 23:48	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**948**		50.2		mg/Kg		02/06/24 16:51	02/11/24 23:48	1
Diesel Range Organics (Over C10-C28)	**4750**		50.2		mg/Kg		02/06/24 16:51	02/11/24 23:48	1
Oil Range Organics (Over C28-C36)	**203**		50.2		mg/Kg		02/06/24 16:51	02/11/24 23:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*140*	*S1+*	*70 - 130*	*02/06/24 16:51*	*02/11/24 23:48*	*1*
o-Terphenyl	*104*		*70 - 130*	*02/06/24 16:51*	*02/11/24 23:48*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**118**		5.01		mg/Kg			02/08/24 01:49	1

Client Sample ID: BH24-08 1

Lab Sample ID: 890-6109-2
Matrix: Solid
Date Collected: 02/02/24 09:40
Date Received: 02/05/24 10:15
Sample Depth: 1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		02/13/24 15:52	02/16/24 06:03	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/13/24 15:52	02/16/24 06:03	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/13/24 15:52	02/16/24 06:03	1
m-Xylene & p-Xylene	**0.0108**		0.00398		mg/Kg		02/13/24 15:52	02/16/24 06:03	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/13/24 15:52	02/16/24 06:03	1
Xylenes, Total	**0.0108**		0.00398		mg/Kg		02/13/24 15:52	02/16/24 06:03	1

Client Sample Results

Client: Vertex
Project/Site: JRU D1 2

Job ID: 890-6109-1
SDG: 23E-06065

Client Sample ID: BH24-08 1

Date Collected: 02/02/24 09:40
Date Received: 02/05/24 10:15
Sample Depth: 1

Lab Sample ID: 890-6109-2

Matrix: Solid

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*291*	*S1+*	*70 - 130*	*02/13/24 15:52*	*02/16/24 06:03*	*1*
1,4-Difluorobenzene (Surr)	*126*		*70 - 130*	*02/13/24 15:52*	*02/16/24 06:03*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.0108**		0.00398	mg/Kg			02/16/24 06:03	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**649**		50.4	mg/Kg			02/12/24 00:10	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**65.3**		50.4	mg/Kg		02/06/24 16:51	02/12/24 00:10	1
Diesel Range Organics (Over C10-C28)	**584**		50.4	mg/Kg		02/06/24 16:51	02/12/24 00:10	1
Oil Range Organics (Over C28-C36)	<50.4	U	50.4	mg/Kg		02/06/24 16:51	02/12/24 00:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*104*		*70 - 130*	*02/06/24 16:51*	*02/12/24 00:10*	*1*
o-Terphenyl	*103*		*70 - 130*	*02/06/24 16:51*	*02/12/24 00:10*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**180**		4.99	mg/Kg			02/08/24 02:09	1

Client Sample ID: BH24-09 0

Date Collected: 02/02/24 09:50
Date Received: 02/05/24 10:15
Sample Depth: 0

Lab Sample ID: 890-6109-3

Matrix: Solid

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		02/13/24 15:52	02/16/24 06:29	1
Toluene	<0.00199	U	0.00199	mg/Kg		02/13/24 15:52	02/16/24 06:29	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		02/13/24 15:52	02/16/24 06:29	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		02/13/24 15:52	02/16/24 06:29	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		02/13/24 15:52	02/16/24 06:29	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		02/13/24 15:52	02/16/24 06:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*162*	*S1+*	*70 - 130*	*02/13/24 15:52*	*02/16/24 06:29*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*02/13/24 15:52*	*02/16/24 06:29*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			02/16/24 06:29	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**99.6**		50.3	mg/Kg			02/12/24 00:31	1

Eurofins Carlsbad

Client Sample Results

Client: Vertex
Project/Site: JRU D1 2

Job ID: 890-6109-1
SDG: 23E-06065

Client Sample ID: BH24-09 0

Lab Sample ID: 890-6109-3
Matrix: Solid
Date Collected: 02/02/24 09:50
Date Received: 02/05/24 10:15
Sample Depth: 0

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.3	U	50.3		mg/Kg		02/06/24 16:51	02/12/24 00:31	1
Diesel Range Organics (Over C10-C28)	**99.6**		50.3		mg/Kg		02/06/24 16:51	02/12/24 00:31	1
OII Range Organics (Over C28-C36)	<50.3	U	50.3		mg/Kg		02/06/24 16:51	02/12/24 00:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*91*		*70 - 130*	*02/06/24 16:51*	*02/12/24 00:31*	*1*
o-Terphenyl	*94*		*70 - 130*	*02/06/24 16:51*	*02/12/24 00:31*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**88.8**		4.98		mg/Kg			02/08/24 02:16	1

Client Sample ID: BH24-09 1

Lab Sample ID: 890-6109-4
Matrix: Solid
Date Collected: 02/02/24 10:00
Date Received: 02/05/24 10:15
Sample Depth: 1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/13/24 15:52	02/16/24 06:56	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/13/24 15:52	02/16/24 06:56	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/13/24 15:52	02/16/24 06:56	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		02/13/24 15:52	02/16/24 06:56	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/13/24 15:52	02/16/24 06:56	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		02/13/24 15:52	02/16/24 06:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*159*	*S1+*	*70 - 130*	*02/13/24 15:52*	*02/16/24 06:56*	*1*
1,4-Difluorobenzene (Surr)	*74*		*70 - 130*	*02/13/24 15:52*	*02/16/24 06:56*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			02/16/24 06:56	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**64.1**		50.4		mg/Kg			02/12/24 01:15	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.4	U	50.4		mg/Kg		02/06/24 16:51	02/12/24 01:15	1
Diesel Range Organics (Over C10-C28)	**64.1**		50.4		mg/Kg		02/06/24 16:51	02/12/24 01:15	1
OII Range Organics (Over C28-C36)	<50.4	U	50.4		mg/Kg		02/06/24 16:51	02/12/24 01:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*98*		*70 - 130*	*02/06/24 16:51*	*02/12/24 01:15*	*1*
o-Terphenyl	*102*		*70 - 130*	*02/06/24 16:51*	*02/12/24 01:15*	*1*

Client Sample Results

Client: Vertex
Project/Site: JRU D1 2

Job ID: 890-6109-1
SDG: 23E-06065

Client Sample ID: BH24-09 1

Lab Sample ID: 890-6109-4
Matrix: Solid
Date Collected: 02/02/24 10:00
Date Received: 02/05/24 10:15
Sample Depth: 1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**88.2**		4.96		mg/Kg			02/08/24 02:23	1

Client Sample ID: BH24-09 2

Lab Sample ID: 890-6109-5
Matrix: Solid
Date Collected: 02/02/24 10:10
Date Received: 02/05/24 10:15
Sample Depth: 2

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		02/13/24 15:52	02/16/24 07:23	1
Toluene	<0.00201	U	0.00201		mg/Kg		02/13/24 15:52	02/16/24 07:23	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		02/13/24 15:52	02/16/24 07:23	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		02/13/24 15:52	02/16/24 07:23	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		02/13/24 15:52	02/16/24 07:23	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		02/13/24 15:52	02/16/24 07:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*191*	*S1+*	*70 - 130*	*02/13/24 15:52*	*02/16/24 07:23*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*02/13/24 15:52*	*02/16/24 07:23*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			02/16/24 07:23	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**68.5**		49.7		mg/Kg			02/12/24 01:37	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.7	U	49.7		mg/Kg		02/06/24 16:51	02/12/24 01:37	1
Diesel Range Organics (Over C10-C28)	**68.5**		49.7		mg/Kg		02/06/24 16:51	02/12/24 01:37	1
OII Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		02/06/24 16:51	02/12/24 01:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*108*		*70 - 130*	*02/06/24 16:51*	*02/12/24 01:37*	*1*
o-Terphenyl	*112*		*70 - 130*	*02/06/24 16:51*	*02/12/24 01:37*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**105**		5.04		mg/Kg			02/08/24 02:29	1

Client Sample Results

Client: Vertex
Project/Site: JRU D1 2

Job ID: 890-6109-1
SDG: 23E-06065

Client Sample ID: BH24-10 0

Date Collected: 02/02/24 10:20
Date Received: 02/05/24 10:15
Sample Depth: 0

Lab Sample ID: 890-6109-6

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		02/13/24 15:52	02/16/24 07:50	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/13/24 15:52	02/16/24 07:50	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/13/24 15:52	02/16/24 07:50	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		02/13/24 15:52	02/16/24 07:50	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/13/24 15:52	02/16/24 07:50	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		02/13/24 15:52	02/16/24 07:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*131*	*S1+*	*70 - 130*	*02/13/24 15:52*	*02/16/24 07:50*	*1*
1,4-Difluorobenzene (Surr)	*143*	*S1+*	*70 - 130*	*02/13/24 15:52*	*02/16/24 07:50*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			02/16/24 07:50	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			02/12/24 01:58	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/06/24 16:51	02/12/24 01:58	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/06/24 16:51	02/12/24 01:58	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/06/24 16:51	02/12/24 01:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*87*		*70 - 130*	*02/06/24 16:51*	*02/12/24 01:58*	*1*
o-Terphenyl	*90*		*70 - 130*	*02/06/24 16:51*	*02/12/24 01:58*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**138**		5.03		mg/Kg			02/08/24 02:36	1

Client Sample ID: BH24-10 1

Date Collected: 02/02/24 10:30
Date Received: 02/05/24 10:15
Sample Depth: 1

Lab Sample ID: 890-6109-7

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		02/13/24 15:52	02/16/24 08:17	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/13/24 15:52	02/16/24 08:17	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/13/24 15:52	02/16/24 08:17	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		02/13/24 15:52	02/16/24 08:17	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/13/24 15:52	02/16/24 08:17	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		02/13/24 15:52	02/16/24 08:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*132*	*S1+*	*70 - 130*	*02/13/24 15:52*	*02/16/24 08:17*	*1*

Client Sample Results

Client: Vertex
Project/Site: JRU D1 2

Job ID: 890-6109-1
SDG: 23E-06065

Client Sample ID: BH24-10 1

Date Collected: 02/02/24 10:30
Date Received: 02/05/24 10:15
Sample Depth: 1

Lab Sample ID: 890-6109-7

Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*02/13/24 15:52*	*02/16/24 08:17*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			02/16/24 08:17	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			02/12/24 02:20	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/06/24 16:51	02/12/24 02:20	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/06/24 16:51	02/12/24 02:20	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/06/24 16:51	02/12/24 02:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*02/06/24 16:51*	*02/12/24 02:20*	*1*
o-Terphenyl	*100*		*70 - 130*	*02/06/24 16:51*	*02/12/24 02:20*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**104**		4.97		mg/Kg			02/08/24 02:43	1

Client Sample ID: BH24-11 0

Date Collected: 02/02/24 10:40
Date Received: 02/05/24 10:15
Sample Depth: 0

Lab Sample ID: 890-6109-8

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/13/24 15:52	02/16/24 08:43	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/13/24 15:52	02/16/24 08:43	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/13/24 15:52	02/16/24 08:43	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		02/13/24 15:52	02/16/24 08:43	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/13/24 15:52	02/16/24 08:43	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		02/13/24 15:52	02/16/24 08:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*126*		*70 - 130*	*02/13/24 15:52*	*02/16/24 08:43*	*1*
1,4-Difluorobenzene (Surr)	*67*	*S1-*	*70 - 130*	*02/13/24 15:52*	*02/16/24 08:43*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			02/16/24 08:43	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			02/12/24 02:42	1

Client Sample Results

Client: Vertex
Project/Site: JRU D1 2

Job ID: 890-6109-1
SDG: 23E-06065

Client Sample ID: BH24-11 0

Lab Sample ID: 890-6109-8
Matrix: Solid
Date Collected: 02/02/24 10:40
Date Received: 02/05/24 10:15
Sample Depth: 0

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		02/06/24 16:51	02/12/24 02:42	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		02/06/24 16:51	02/12/24 02:42	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		02/06/24 16:51	02/12/24 02:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*102*		*70 - 130*	*02/06/24 16:51*	*02/12/24 02:42*	*1*
o-Terphenyl	*105*		*70 - 130*	*02/06/24 16:51*	*02/12/24 02:42*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**465**		4.99		mg/Kg			02/08/24 02:50	1

Client Sample ID: BH24-11 1

Lab Sample ID: 890-6109-9
Matrix: Solid
Date Collected: 02/02/24 10:50
Date Received: 02/05/24 10:15
Sample Depth: 1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		02/13/24 15:52	02/16/24 09:10	1
Toluene	<0.00201	U	0.00201		mg/Kg		02/13/24 15:52	02/16/24 09:10	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		02/13/24 15:52	02/16/24 09:10	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		02/13/24 15:52	02/16/24 09:10	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		02/13/24 15:52	02/16/24 09:10	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		02/13/24 15:52	02/16/24 09:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*181*	*S1+*	*70 - 130*	*02/13/24 15:52*	*02/16/24 09:10*	*1*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*02/13/24 15:52*	*02/16/24 09:10*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			02/16/24 09:10	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.6	U	49.6		mg/Kg			02/12/24 03:03	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.6	U	49.6		mg/Kg		02/06/24 16:51	02/12/24 03:03	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6		mg/Kg		02/06/24 16:51	02/12/24 03:03	1
OII Range Organics (Over C28-C36)	<49.6	U	49.6		mg/Kg		02/06/24 16:51	02/12/24 03:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*116*		*70 - 130*	*02/06/24 16:51*	*02/12/24 03:03*	*1*
o-Terphenyl	*121*		*70 - 130*	*02/06/24 16:51*	*02/12/24 03:03*	*1*

Client Sample Results

Client: Vertex
Project/Site: JRU D1 2

Job ID: 890-6109-1
SDG: 23E-06065

Client Sample ID: BH24-11 1

Lab Sample ID: 890-6109-9
Matrix: Solid
Date Collected: 02/02/24 10:50
Date Received: 02/05/24 10:15
Sample Depth: 1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	198		5.04		mg/Kg			02/08/24 00:06	1

Client Sample ID: BH24-11 2

Lab Sample ID: 890-6109-10
Matrix: Solid
Date Collected: 02/02/24 11:00
Date Received: 02/05/24 10:15
Sample Depth: 2

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/13/24 15:52	02/16/24 09:36	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/13/24 15:52	02/16/24 09:36	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/13/24 15:52	02/16/24 09:36	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		02/13/24 15:52	02/16/24 09:36	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/13/24 15:52	02/16/24 09:36	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		02/13/24 15:52	02/16/24 09:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*165*	*S1+*	*70 - 130*	*02/13/24 15:52*	*02/16/24 09:36*	*1*
1,4-Difluorobenzene (Surr)	*125*		*70 - 130*	*02/13/24 15:52*	*02/16/24 09:36*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			02/16/24 09:36	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.1	U	50.1		mg/Kg			02/12/24 03:25	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.1	U	50.1		mg/Kg		02/06/24 16:51	02/12/24 03:25	1
Diesel Range Organics (Over C10-C28)	<50.1	U	50.1		mg/Kg		02/06/24 16:51	02/12/24 03:25	1
OII Range Organics (Over C28-C36)	<50.1	U	50.1		mg/Kg		02/06/24 16:51	02/12/24 03:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*121*		*70 - 130*	*02/06/24 16:51*	*02/12/24 03:25*	*1*
o-Terphenyl	*126*		*70 - 130*	*02/06/24 16:51*	*02/12/24 03:25*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	148		5.03		mg/Kg			02/08/24 00:11	1

Surrogate Summary

Client: Vertex
Project/Site: JRU D1 2

Job ID: 890-6109-1
SDG: 23E-06065

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-39032-A-16-D MS	Matrix Spike	103	93
880-39032-A-16-E MSD	Matrix Spike Duplicate	104	100
890-6109-1	BH24-08 0	328 S1+	102
890-6109-1 MS	BH24-08 0	494 S1+	101
890-6109-1 MSD	BH24-08 0	239 S1+	49 S1-
890-6109-2	BH24-08 1	291 S1+	126
890-6109-3	BH24-09 0	162 S1+	99
890-6109-4	BH24-09 1	159 S1+	74
890-6109-5	BH24-09 2	191 S1+	105
890-6109-6	BH24-10 0	131 S1+	143 S1+
890-6109-7	BH24-10 1	132 S1+	91
890-6109-8	BH24-11 0	126	67 S1-
890-6109-9	BH24-11 1	181 S1+	104
890-6109-10	BH24-11 2	165 S1+	125
LCS 880-73078/1-A	Lab Control Sample	152 S1+	58 S1-
LCS 880-73334/1-A	Lab Control Sample	108	98
LCSD 880-73078/2-A	Lab Control Sample Dup	160 S1+	65 S1-
LCSD 880-73334/2-A	Lab Control Sample Dup	108	99
MB 880-73075/5-A	Method Blank	72	78
MB 880-73078/5-A	Method Blank	100	71
MB 880-73179/5-A	Method Blank	128	121
MB 880-73334/5-A	Method Blank	145 S1+	140 S1+

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-6096-A-2-C MS	Matrix Spike	0.9 S1-	0.3 S1-
890-6096-A-2-D MSD	Matrix Spike Duplicate	2 S1-	0.3 S1-
890-6109-1	BH24-08 0	140 S1+	104
890-6109-2	BH24-08 1	104	103
890-6109-3	BH24-09 0	91	94
890-6109-4	BH24-09 1	98	102
890-6109-5	BH24-09 2	108	112
890-6109-6	BH24-10 0	87	90
890-6109-7	BH24-10 1	96	100
890-6109-8	BH24-11 0	102	105
890-6109-9	BH24-11 1	116	121
890-6109-10	BH24-11 2	121	126
LCS 880-72531/2-A	Lab Control Sample	120	115
LCSD 880-72531/3-A	Lab Control Sample Dup	105	101
MB 880-72531/1-A	Method Blank	204 S1+	221 S1+

Surrogate Legend

1CO = 1-Chlorooctane

Surrogate Summary

Client: Vertex
Project/Site: JRU D1 2

Job ID: 890-6109-1
SDG: 23E-06065

OTPH = o-Terphenyl

QC Sample Results

Client: Vertex
Project/Site: JRU D1 2

Job ID: 890-6109-1
SDG: 23E-06065

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-73075/5-A
Matrix: Solid
Analysis Batch: 73249

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 73075

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/13/24 15:45	02/15/24 15:24	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/13/24 15:45	02/15/24 15:24	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/13/24 15:45	02/15/24 15:24	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/13/24 15:45	02/15/24 15:24	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/13/24 15:45	02/15/24 15:24	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/13/24 15:45	02/15/24 15:24	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*72*		*70 - 130*	*02/13/24 15:45*	*02/15/24 15:24*	*1*
1,4-Difluorobenzene (Surr)	*78*		*70 - 130*	*02/13/24 15:45*	*02/15/24 15:24*	*1*

Lab Sample ID: MB 880-73078/5-A
Matrix: Solid
Analysis Batch: 73249

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 73078

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/13/24 15:52	02/16/24 05:09	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/13/24 15:52	02/16/24 05:09	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/13/24 15:52	02/16/24 05:09	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/13/24 15:52	02/16/24 05:09	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/13/24 15:52	02/16/24 05:09	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/13/24 15:52	02/16/24 05:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*02/13/24 15:52*	*02/16/24 05:09*	*1*
1,4-Difluorobenzene (Surr)	*71*		*70 - 130*	*02/13/24 15:52*	*02/16/24 05:09*	*1*

Lab Sample ID: LCS 880-73078/1-A
Matrix: Solid
Analysis Batch: 73249

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 73078

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.07928		mg/Kg		79	70 - 130		
Toluene			0.100	0.09271		mg/Kg		93	70 - 130		
Ethylbenzene			0.100	0.1136		mg/Kg		114	70 - 130		
m-Xylene & p-Xylene			0.200	0.2374		mg/Kg		119	70 - 130		
o-Xylene			0.100	0.1140		mg/Kg		114	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*152*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*58*	*S1-*	*70 - 130*

Lab Sample ID: LCSD 880-73078/2-A
Matrix: Solid
Analysis Batch: 73249

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 73078

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.08206		mg/Kg		82	70 - 130	3	35

Eurofins Carlsbad

QC Sample Results

Client: Vertex
Project/Site: JRU D1 2

Job ID: 890-6109-1
SDG: 23E-06065

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

Lab Sample ID: LCSD 880-73078/2-A
Matrix: Solid
Analysis Batch: 73249

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 73078

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.1008		mg/Kg		101	70 - 130	8	35
Ethylbenzene			0.100	0.1034		mg/Kg		103	70 - 130	9	35
m-Xylene & p-Xylene			0.200	0.2531		mg/Kg		127	70 - 130	6	35
o-Xylene			0.100	0.1140		mg/Kg		114	70 - 130	0	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*160*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*65*	*S1-*	*70 - 130*

Lab Sample ID: 890-6109-1 MS
Matrix: Solid
Analysis Batch: 73249

Client Sample ID: BH24-08 0
Prep Type: Total/NA
Prep Batch: 73078

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00200	U F1 F2	0.0996	0.1227		mg/Kg		122	70 - 130
Toluene	0.383	F1 F2	0.0996	0.6269	E F1	mg/Kg		244	70 - 130
Ethylbenzene	0.334	F1 F2	0.0996	0.5701	E F1	mg/Kg		237	70 - 130
m-Xylene & p-Xylene	2.18	E F2	0.199	3.206	E 4	mg/Kg		516	70 - 130
o-Xylene	0.753	E F2	0.0996	1.140	E 4	mg/Kg		389	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*494*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: 890-6109-1 MSD
Matrix: Solid
Analysis Batch: 73249

Client Sample ID: BH24-08 0
Prep Type: Total/NA
Prep Batch: 73078

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U F1 F2	0.0990	0.05626	F1 F2	mg/Kg		56	70 - 130	74	35
Toluene	0.383	F1 F2	0.0990	0.3703	F1 F2	mg/Kg		-13	70 - 130	51	35
Ethylbenzene	0.334	F1 F2	0.0990	0.3009	F1 F2	mg/Kg		-33	70 - 130	62	35
m-Xylene & p-Xylene	2.18	E F2	0.198	1.752	E 4 F2	mg/Kg		-215	70 - 130	59	35
o-Xylene	0.753	E F2	0.0990	0.5798	E 4 F2	mg/Kg		-175	70 - 130	65	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*239*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*49*	*S1-*	*70 - 130*

Lab Sample ID: MB 880-73179/5-A
Matrix: Solid
Analysis Batch: 73252

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 73179

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/14/24 15:25	02/16/24 03:55	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/14/24 15:25	02/16/24 03:55	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/14/24 15:25	02/16/24 03:55	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/14/24 15:25	02/16/24 03:55	1

QC Sample Results

Client: Vertex
Project/Site: JRU D1 2

Job ID: 890-6109-1
SDG: 23E-06065

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

Lab Sample ID: MB 880-73179/5-A
Matrix: Solid
Analysis Batch: 73252

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 73179

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/14/24 15:25	02/16/24 03:55	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/14/24 15:25	02/16/24 03:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*128*		*70 - 130*	*02/14/24 15:25*	*02/16/24 03:55*	*1*
1,4-Difluorobenzene (Surr)	*121*		*70 - 130*	*02/14/24 15:25*	*02/16/24 03:55*	*1*

Lab Sample ID: MB 880-73334/5-A
Matrix: Solid
Analysis Batch: 73252

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 73334

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/16/24 10:47	02/16/24 18:13	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/16/24 10:47	02/16/24 18:13	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/16/24 10:47	02/16/24 18:13	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/16/24 10:47	02/16/24 18:13	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/16/24 10:47	02/16/24 18:13	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/16/24 10:47	02/16/24 18:13	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*145*	*S1+*	*70 - 130*	*02/16/24 10:47*	*02/16/24 18:13*	*1*
1,4-Difluorobenzene (Surr)	*140*	*S1+*	*70 - 130*	*02/16/24 10:47*	*02/16/24 18:13*	*1*

Lab Sample ID: LCS 880-73334/1-A
Matrix: Solid
Analysis Batch: 73252

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 73334

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09948		mg/Kg		99	70 - 130		
Toluene			0.100	0.09778		mg/Kg		98	70 - 130		
Ethylbenzene			0.100	0.1042		mg/Kg		104	70 - 130		
m-Xylene & p-Xylene			0.200	0.2148		mg/Kg		107	70 - 130		
o-Xylene			0.100	0.1043		mg/Kg		104	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*

Lab Sample ID: LCSD 880-73334/2-A
Matrix: Solid
Analysis Batch: 73252

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 73334

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1000		mg/Kg		100	70 - 130	1	35
Toluene			0.100	0.09349		mg/Kg		93	70 - 130	4	35
Ethylbenzene			0.100	0.1028		mg/Kg		103	70 - 130	1	35
m-Xylene & p-Xylene			0.200	0.2138		mg/Kg		107	70 - 130	0	35
o-Xylene			0.100	0.1043		mg/Kg		104	70 - 130	0	35

QC Sample Results

Client: Vertex
Project/Site: JRU D1 2

Job ID: 890-6109-1
SDG: 23E-06065

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

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	108		70 - 130
1,4-Difluorobenzene (Surr)	99		70 - 130

Lab Sample ID: 880-39032-A-16-D MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 73252 — **Prep Batch: 73334**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00199	U	0.0996	0.1056		mg/Kg		106	70 - 130
Toluene	<0.00199	U	0.0996	0.09431		mg/Kg		94	70 - 130
Ethylbenzene	<0.00199	U	0.0996	0.1044		mg/Kg		105	70 - 130
m-Xylene & p-Xylene	<0.00398	U	0.199	0.2083		mg/Kg		105	70 - 130
o-Xylene	<0.00199	U	0.0996	0.09934		mg/Kg		99	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	103		70 - 130
1,4-Difluorobenzene (Surr)	93		70 - 130

Lab Sample ID: 880-39032-A-16-E MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 73252 — **Prep Batch: 73334**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.101	0.1112		mg/Kg		110	70 - 130	5	35
Toluene	<0.00199	U	0.101	0.1004		mg/Kg		99	70 - 130	6	35
Ethylbenzene	<0.00199	U	0.101	0.1033		mg/Kg		102	70 - 130	1	35
m-Xylene & p-Xylene	<0.00398	U	0.202	0.2048		mg/Kg		102	70 - 130	2	35
o-Xylene	<0.00199	U	0.101	0.1092		mg/Kg		108	70 - 130	9	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	104		70 - 130
1,4-Difluorobenzene (Surr)	100		70 - 130

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

Lab Sample ID: MB 880-72531/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 72814 — **Prep Batch: 72531**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		02/06/24 16:51	02/11/24 19:18	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		02/06/24 16:51	02/11/24 19:18	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		02/06/24 16:51	02/11/24 19:18	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	204	S1+	70 - 130	02/06/24 16:51	02/11/24 19:18	1
o-Terphenyl	221	S1+	70 - 130	02/06/24 16:51	02/11/24 19:18	1

QC Sample Results

Client: Vertex
Project/Site: JRU D1 2

Job ID: 890-6109-1
SDG: 23E-06065

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

Lab Sample ID: LCS 880-72531/2-A
Matrix: Solid
Analysis Batch: 72814

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 72531

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1019		mg/Kg		102	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1033		mg/Kg		103	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*120*		*70 - 130*
o-Terphenyl	*115*		*70 - 130*

Lab Sample ID: LCSD 880-72531/3-A
Matrix: Solid
Analysis Batch: 72814

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 72531

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	903.6		mg/Kg		90	70 - 130	12	20
Diesel Range Organics (Over C10-C28)			1000	932.7		mg/Kg		93	70 - 130	10	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*105*		*70 - 130*
o-Terphenyl	*101*		*70 - 130*

Lab Sample ID: 890-6096-A-2-C MS
Matrix: Solid
Analysis Batch: 72814

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 72531

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.5	U F1	1010	<50.4	U F1	mg/Kg		2	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.5	U F1	1010	<50.4	U F1	mg/Kg		-0.1	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*0.9*	*S1-*	*70 - 130*
o-Terphenyl	*0.3*	*S1-*	*70 - 130*

Lab Sample ID: 890-6096-A-2-D MSD
Matrix: Solid
Analysis Batch: 72814

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 72531

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.5	U F1	1010	<50.4	U F1	mg/Kg		2	70 - 130	6	20
Diesel Range Organics (Over C10-C28)	<50.5	U F1	1010	<50.4	U F1	mg/Kg		0.1	70 - 130	9	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*2*	*S1-*	*70 - 130*

QC Sample Results

Client: Vertex
Project/Site: JRU D1 2

Job ID: 890-6109-1
SDG: 23E-06065

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

Lab Sample ID: 890-6096-A-2-D MSD
Matrix: Solid
Analysis Batch: 72814

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 72531

Surrogate	MSD %Recovery	MSD Qualifier	Limits
o-Terphenyl	0.3	S1-	70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-72378/1-A
Matrix: Solid
Analysis Batch: 72554

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			02/07/24 23:26	1

Lab Sample ID: LCS 880-72378/2-A
Matrix: Solid
Analysis Batch: 72554

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	258.1		mg/Kg		103	90 - 110		

Lab Sample ID: LCSD 880-72378/3-A
Matrix: Solid
Analysis Batch: 72554

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	255.9		mg/Kg		102	90 - 110	1	20

Lab Sample ID: 890-6108-A-23-B MS
Matrix: Solid
Analysis Batch: 72554

Client Sample ID: Matrix Spike
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	550		2490	3018		mg/Kg		99	90 - 110		

Lab Sample ID: 890-6108-A-23-C MSD
Matrix: Solid
Analysis Batch: 72554

Client Sample ID: Matrix Spike Duplicate
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	550		2490	3030		mg/Kg		100	90 - 110	0	20

Lab Sample ID: MB 880-72454/1-A
Matrix: Solid
Analysis Batch: 72559

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			02/07/24 22:06	1

QC Sample Results

Client: Vertex
Project/Site: JRU D1 2

Job ID: 890-6109-1
SDG: 23E-06065

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-72454/2-A
Matrix: Solid
Analysis Batch: 72559

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	256.7		mg/Kg		103	90 - 110		

Lab Sample ID: LCSD 880-72454/3-A
Matrix: Solid
Analysis Batch: 72559

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	257.5		mg/Kg		103	90 - 110	0	20

Lab Sample ID: 880-38127-A-3-B MS
Matrix: Solid
Analysis Batch: 72559

Client Sample ID: Matrix Spike
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	150		253	405.5		mg/Kg		101	90 - 110		

Lab Sample ID: 880-38127-A-3-C MSD
Matrix: Solid
Analysis Batch: 72559

Client Sample ID: Matrix Spike Duplicate
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	150		253	406.2		mg/Kg		101	90 - 110	0	20

QC Association Summary

Client: Vertex
Project/Site: JRU D1 2

Job ID: 890-6109-1
SDG: 23E-06065

GC VOA

Prep Batch: 73075

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-73075/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 73078

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6109-1	BH24-08 0	Total/NA	Solid	5035	
890-6109-2	BH24-08 1	Total/NA	Solid	5035	
890-6109-3	BH24-09 0	Total/NA	Solid	5035	
890-6109-4	BH24-09 1	Total/NA	Solid	5035	
890-6109-5	BH24-09 2	Total/NA	Solid	5035	
890-6109-6	BH24-10 0	Total/NA	Solid	5035	
890-6109-7	BH24-10 1	Total/NA	Solid	5035	
890-6109-8	BH24-11 0	Total/NA	Solid	5035	
890-6109-9	BH24-11 1	Total/NA	Solid	5035	
890-6109-10	BH24-11 2	Total/NA	Solid	5035	
MB 880-73078/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-73078/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-73078/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-6109-1 MS	BH24-08 0	Total/NA	Solid	5035	
890-6109-1 MSD	BH24-08 0	Total/NA	Solid	5035	

Prep Batch: 73179

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-73179/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 73249

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6109-1	BH24-08 0	Total/NA	Solid	8021B	73078
890-6109-2	BH24-08 1	Total/NA	Solid	8021B	73078
890-6109-3	BH24-09 0	Total/NA	Solid	8021B	73078
890-6109-4	BH24-09 1	Total/NA	Solid	8021B	73078
890-6109-5	BH24-09 2	Total/NA	Solid	8021B	73078
890-6109-6	BH24-10 0	Total/NA	Solid	8021B	73078
890-6109-7	BH24-10 1	Total/NA	Solid	8021B	73078
890-6109-8	BH24-11 0	Total/NA	Solid	8021B	73078
890-6109-9	BH24-11 1	Total/NA	Solid	8021B	73078
890-6109-10	BH24-11 2	Total/NA	Solid	8021B	73078
MB 880-73075/5-A	Method Blank	Total/NA	Solid	8021B	73075
MB 880-73078/5-A	Method Blank	Total/NA	Solid	8021B	73078
LCS 880-73078/1-A	Lab Control Sample	Total/NA	Solid	8021B	73078
LCSD 880-73078/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	73078
890-6109-1 MS	BH24-08 0	Total/NA	Solid	8021B	73078
890-6109-1 MSD	BH24-08 0	Total/NA	Solid	8021B	73078

Analysis Batch: 73252

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6109-1	BH24-08 0	Total/NA	Solid	8021B	73334
MB 880-73179/5-A	Method Blank	Total/NA	Solid	8021B	73179
MB 880-73334/5-A	Method Blank	Total/NA	Solid	8021B	73334
LCS 880-73334/1-A	Lab Control Sample	Total/NA	Solid	8021B	73334
LCSD 880-73334/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	73334
880-39032-A-16-D MS	Matrix Spike	Total/NA	Solid	8021B	73334

QC Association Summary

Client: Vertex
Project/Site: JRU D1 2

Job ID: 890-6109-1
SDG: 23E-06065

GC VOA (Continued)

Analysis Batch: 73252 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-39032-A-16-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	73334

Prep Batch: 73334

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6109-1	BH24-08 0	Total/NA	Solid	5035	
MB 880-73334/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-73334/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-73334/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-39032-A-16-D MS	Matrix Spike	Total/NA	Solid	5035	
880-39032-A-16-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 73389

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6109-1	BH24-08 0	Total/NA	Solid	Total BTEX	
890-6109-2	BH24-08 1	Total/NA	Solid	Total BTEX	
890-6109-3	BH24-09 0	Total/NA	Solid	Total BTEX	
890-6109-4	BH24-09 1	Total/NA	Solid	Total BTEX	
890-6109-5	BH24-09 2	Total/NA	Solid	Total BTEX	
890-6109-6	BH24-10 0	Total/NA	Solid	Total BTEX	
890-6109-7	BH24-10 1	Total/NA	Solid	Total BTEX	
890-6109-8	BH24-11 0	Total/NA	Solid	Total BTEX	
890-6109-9	BH24-11 1	Total/NA	Solid	Total BTEX	
890-6109-10	BH24-11 2	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 72531

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6109-1	BH24-08 0	Total/NA	Solid	8015NM Prep	
890-6109-2	BH24-08 1	Total/NA	Solid	8015NM Prep	
890-6109-3	BH24-09 0	Total/NA	Solid	8015NM Prep	
890-6109-4	BH24-09 1	Total/NA	Solid	8015NM Prep	
890-6109-5	BH24-09 2	Total/NA	Solid	8015NM Prep	
890-6109-6	BH24-10 0	Total/NA	Solid	8015NM Prep	
890-6109-7	BH24-10 1	Total/NA	Solid	8015NM Prep	
890-6109-8	BH24-11 0	Total/NA	Solid	8015NM Prep	
890-6109-9	BH24-11 1	Total/NA	Solid	8015NM Prep	
890-6109-10	BH24-11 2	Total/NA	Solid	8015NM Prep	
MB 880-72531/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-72531/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-72531/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-6096-A-2-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-6096-A-2-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 72814

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6109-1	BH24-08 0	Total/NA	Solid	8015B NM	72531
890-6109-2	BH24-08 1	Total/NA	Solid	8015B NM	72531
890-6109-3	BH24-09 0	Total/NA	Solid	8015B NM	72531
890-6109-4	BH24-09 1	Total/NA	Solid	8015B NM	72531
890-6109-5	BH24-09 2	Total/NA	Solid	8015B NM	72531

QC Association Summary

Client: Vertex
Project/Site: JRU D1 2

Job ID: 890-6109-1
SDG: 23E-06065

GC Semi VOA (Continued)

Analysis Batch: 72814 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6109-6	BH24-10 0	Total/NA	Solid	8015B NM	72531
890-6109-7	BH24-10 1	Total/NA	Solid	8015B NM	72531
890-6109-8	BH24-11 0	Total/NA	Solid	8015B NM	72531
890-6109-9	BH24-11 1	Total/NA	Solid	8015B NM	72531
890-6109-10	BH24-11 2	Total/NA	Solid	8015B NM	72531
MB 880-72531/1-A	Method Blank	Total/NA	Solid	8015B NM	72531
LCS 880-72531/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	72531
LCSD 880-72531/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	72531
890-6096-A-2-C MS	Matrix Spike	Total/NA	Solid	8015B NM	72531
890-6096-A-2-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	72531

Analysis Batch: 72976

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6109-1	BH24-08 0	Total/NA	Solid	8015 NM	
890-6109-2	BH24-08 1	Total/NA	Solid	8015 NM	
890-6109-3	BH24-09 0	Total/NA	Solid	8015 NM	
890-6109-4	BH24-09 1	Total/NA	Solid	8015 NM	
890-6109-5	BH24-09 2	Total/NA	Solid	8015 NM	
890-6109-6	BH24-10 0	Total/NA	Solid	8015 NM	
890-6109-7	BH24-10 1	Total/NA	Solid	8015 NM	
890-6109-8	BH24-11 0	Total/NA	Solid	8015 NM	
890-6109-9	BH24-11 1	Total/NA	Solid	8015 NM	
890-6109-10	BH24-11 2	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 72378

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6109-1	BH24-08 0	Soluble	Solid	DI Leach	
890-6109-2	BH24-08 1	Soluble	Solid	DI Leach	
890-6109-3	BH24-09 0	Soluble	Solid	DI Leach	
890-6109-4	BH24-09 1	Soluble	Solid	DI Leach	
890-6109-5	BH24-09 2	Soluble	Solid	DI Leach	
890-6109-6	BH24-10 0	Soluble	Solid	DI Leach	
890-6109-7	BH24-10 1	Soluble	Solid	DI Leach	
890-6109-8	BH24-11 0	Soluble	Solid	DI Leach	
MB 880-72378/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-72378/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-72378/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-6108-A-23-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-6108-A-23-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Leach Batch: 72454

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6109-9	BH24-11 1	Soluble	Solid	DI Leach	
890-6109-10	BH24-11 2	Soluble	Solid	DI Leach	
MB 880-72454/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-72454/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-72454/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-38127-A-3-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-38127-A-3-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

QC Association Summary

Client: Vertex
Project/Site: JRU D1 2

Job ID: 890-6109-1
SDG: 23E-06065

HPLC/IC

Analysis Batch: 72554

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6109-1	BH24-08 0	Soluble	Solid	300.0	72378
890-6109-2	BH24-08 1	Soluble	Solid	300.0	72378
890-6109-3	BH24-09 0	Soluble	Solid	300.0	72378
890-6109-4	BH24-09 1	Soluble	Solid	300.0	72378
890-6109-5	BH24-09 2	Soluble	Solid	300.0	72378
890-6109-6	BH24-10 0	Soluble	Solid	300.0	72378
890-6109-7	BH24-10 1	Soluble	Solid	300.0	72378
890-6109-8	BH24-11 0	Soluble	Solid	300.0	72378
MB 880-72378/1-A	Method Blank	Soluble	Solid	300.0	72378
LCS 880-72378/2-A	Lab Control Sample	Soluble	Solid	300.0	72378
LCSD 880-72378/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	72378
890-6108-A-23-B MS	Matrix Spike	Soluble	Solid	300.0	72378
890-6108-A-23-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	72378

Analysis Batch: 72559

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6109-9	BH24-11 1	Soluble	Solid	300.0	72454
890-6109-10	BH24-11 2	Soluble	Solid	300.0	72454
MB 880-72454/1-A	Method Blank	Soluble	Solid	300.0	72454
LCS 880-72454/2-A	Lab Control Sample	Soluble	Solid	300.0	72454
LCSD 880-72454/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	72454
880-38127-A-3-B MS	Matrix Spike	Soluble	Solid	300.0	72454
880-38127-A-3-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	72454

Lab Chronicle

Client: Vertex
Project/Site: JRU D1 2

Job ID: 890-6109-1
SDG: 23E-06065

Client Sample ID: BH24-08 0

Lab Sample ID: 890-6109-1

Date Collected: 02/02/24 09:30
Matrix: Solid
Date Received: 02/05/24 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	73334	02/16/24 10:47	EL	EET MID
Total/NA	Analysis	8021B		20	5 mL	5 mL	73252	02/16/24 21:46	SM	EET MID
Total/NA	Prep	5035			4.99 g	5 mL	73078	02/13/24 15:52	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	73249	02/16/24 05:36	SM	EET MID
Total/NA	Analysis	Total BTEX		1			73389	02/16/24 21:46	SM	EET MID
Total/NA	Analysis	8015 NM		1			72976	02/11/24 23:48	SM	EET MID
Total/NA	Prep	8015NM Prep			9.97 g	10 mL	72531	02/06/24 16:51	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	72814	02/11/24 23:48	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	72378	02/05/24 13:33	SMC	EET MID
Soluble	Analysis	300.0		1			72554	02/08/24 01:49	CH	EET MID

Client Sample ID: BH24-08 1

Lab Sample ID: 890-6109-2

Date Collected: 02/02/24 09:40
Matrix: Solid
Date Received: 02/05/24 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	73078	02/13/24 15:52	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	73249	02/16/24 06:03	SM	EET MID
Total/NA	Analysis	Total BTEX		1			73389	02/16/24 06:03	SM	EET MID
Total/NA	Analysis	8015 NM		1			72976	02/12/24 00:10	SM	EET MID
Total/NA	Prep	8015NM Prep			9.92 g	10 mL	72531	02/06/24 16:51	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	72814	02/12/24 00:10	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	72378	02/05/24 13:33	SMC	EET MID
Soluble	Analysis	300.0		1			72554	02/08/24 02:09	CH	EET MID

Client Sample ID: BH24-09 0

Lab Sample ID: 890-6109-3

Date Collected: 02/02/24 09:50
Matrix: Solid
Date Received: 02/05/24 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	73078	02/13/24 15:52	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	73249	02/16/24 06:29	SM	EET MID
Total/NA	Analysis	Total BTEX		1			73389	02/16/24 06:29	SM	EET MID
Total/NA	Analysis	8015 NM		1			72976	02/12/24 00:31	SM	EET MID
Total/NA	Prep	8015NM Prep			9.95 g	10 mL	72531	02/06/24 16:51	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	72814	02/12/24 00:31	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	72378	02/05/24 13:33	SMC	EET MID
Soluble	Analysis	300.0		1			72554	02/08/24 02:16	CH	EET MID

Lab Chronicle

Client: Vertex
Project/Site: JRU D1 2

Job ID: 890-6109-1
SDG: 23E-06065

Client Sample ID: BH24-09 1

Lab Sample ID: 890-6109-4
Matrix: Solid
Date Collected: 02/02/24 10:00
Date Received: 02/05/24 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	73078	02/13/24 15:52	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	73249	02/16/24 06:56	SM	EET MID
Total/NA	Analysis	Total BTEX		1			73389	02/16/24 06:56	SM	EET MID
Total/NA	Analysis	8015 NM		1			72976	02/12/24 01:15	SM	EET MID
Total/NA	Prep	8015NM Prep			9.93 g	10 mL	72531	02/06/24 16:51	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	72814	02/12/24 01:15	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	72378	02/05/24 13:33	SMC	EET MID
Soluble	Analysis	300.0		1			72554	02/08/24 02:23	CH	EET MID

Client Sample ID: BH24-09 2

Lab Sample ID: 890-6109-5
Matrix: Solid
Date Collected: 02/02/24 10:10
Date Received: 02/05/24 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	73078	02/13/24 15:52	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	73249	02/16/24 07:23	SM	EET MID
Total/NA	Analysis	Total BTEX		1			73389	02/16/24 07:23	SM	EET MID
Total/NA	Analysis	8015 NM		1			72976	02/12/24 01:37	SM	EET MID
Total/NA	Prep	8015NM Prep			10.06 g	10 mL	72531	02/06/24 16:51	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	72814	02/12/24 01:37	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	72378	02/05/24 13:33	SMC	EET MID
Soluble	Analysis	300.0		1			72554	02/08/24 02:29	CH	EET MID

Client Sample ID: BH24-10 0

Lab Sample ID: 890-6109-6
Matrix: Solid
Date Collected: 02/02/24 10:20
Date Received: 02/05/24 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	73078	02/13/24 15:52	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	73249	02/16/24 07:50	SM	EET MID
Total/NA	Analysis	Total BTEX		1			73389	02/16/24 07:50	SM	EET MID
Total/NA	Analysis	8015 NM		1			72976	02/12/24 01:58	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	72531	02/06/24 16:51	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	72814	02/12/24 01:58	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	72378	02/05/24 13:33	SMC	EET MID
Soluble	Analysis	300.0		1			72554	02/08/24 02:36	CH	EET MID

Client Sample ID: BH24-10 1

Lab Sample ID: 890-6109-7
Matrix: Solid
Date Collected: 02/02/24 10:30
Date Received: 02/05/24 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	73078	02/13/24 15:52	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	73249	02/16/24 08:17	SM	EET MID
Total/NA	Analysis	Total BTEX		1			73389	02/16/24 08:17	SM	EET MID

Lab Chronicle

Client: Vertex
Project/Site: JRU D1 2

Job ID: 890-6109-1
SDG: 23E-06065

Client Sample ID: BH24-10 1

Lab Sample ID: 890-6109-7
Matrix: Solid
Date Collected: 02/02/24 10:30
Date Received: 02/05/24 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			72976	02/12/24 02:20	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	72531	02/06/24 16:51	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	72814	02/12/24 02:20	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	72378	02/05/24 13:33	SMC	EET MID
Soluble	Analysis	300.0		1			72554	02/08/24 02:43	CH	EET MID

Client Sample ID: BH24-11 0

Lab Sample ID: 890-6109-8
Matrix: Solid
Date Collected: 02/02/24 10:40
Date Received: 02/05/24 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	73078	02/13/24 15:52	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	73249	02/16/24 08:43	SM	EET MID
Total/NA	Analysis	Total BTEX		1			73389	02/16/24 08:43	SM	EET MID
Total/NA	Analysis	8015 NM		1			72976	02/12/24 02:42	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	72531	02/06/24 16:51	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	72814	02/12/24 02:42	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	72378	02/05/24 13:33	SMC	EET MID
Soluble	Analysis	300.0		1			72554	02/08/24 02:50	CH	EET MID

Client Sample ID: BH24-11 1

Lab Sample ID: 890-6109-9
Matrix: Solid
Date Collected: 02/02/24 10:50
Date Received: 02/05/24 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	73078	02/13/24 15:52	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	73249	02/16/24 09:10	SM	EET MID
Total/NA	Analysis	Total BTEX		1			73389	02/16/24 09:10	SM	EET MID
Total/NA	Analysis	8015 NM		1			72976	02/12/24 03:03	SM	EET MID
Total/NA	Prep	8015NM Prep			10.09 g	10 mL	72531	02/06/24 16:51	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	72814	02/12/24 03:03	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	72454	02/06/24 10:07	SMC	EET MID
Soluble	Analysis	300.0		1			72559	02/08/24 00:06	CH	EET MID

Client Sample ID: BH24-11 2

Lab Sample ID: 890-6109-10
Matrix: Solid
Date Collected: 02/02/24 11:00
Date Received: 02/05/24 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	73078	02/13/24 15:52	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	73249	02/16/24 09:36	SM	EET MID
Total/NA	Analysis	Total BTEX		1			73389	02/16/24 09:36	SM	EET MID
Total/NA	Analysis	8015 NM		1			72976	02/12/24 03:25	SM	EET MID
Total/NA	Prep	8015NM Prep			9.98 g	10 mL	72531	02/06/24 16:51	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	72814	02/12/24 03:25	SM	EET MID

Lab Chronicle

Client: Vertex
Project/Site: JRU D1 2

Job ID: 890-6109-1
SDG: 23E-06065

Client Sample ID: BH24-11 2

Date Collected: 02/02/24 11:00
Date Received: 02/05/24 10:15

Lab Sample ID: 890-6109-10

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.97 g	50 mL	72454	02/06/24 10:07	SMC	EET MID
Soluble	Analysis	300.0		1			72559	02/08/24 00:11	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Vertex
Project/Site: JRU D1 2

Job ID: 890-6109-1
SDG: 23E-06065

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24

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

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

Method Summary

Client: Vertex
Project/Site: JRU D1 2

Job ID: 890-6109-1
SDG: 23E-06065

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

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Vertex
Project/Site: JRU D1 2

Job ID: 890-6109-1
SDG: 23E-06065

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-6109-1	BH24-08 0	Solid	02/02/24 09:30	02/05/24 10:15	0
890-6109-2	BH24-08 1	Solid	02/02/24 09:40	02/05/24 10:15	1
890-6109-3	BH24-09 0	Solid	02/02/24 09:50	02/05/24 10:15	0
890-6109-4	BH24-09 1	Solid	02/02/24 10:00	02/05/24 10:15	1
890-6109-5	BH24-09 2	Solid	02/02/24 10:10	02/05/24 10:15	2
890-6109-6	BH24-10 0	Solid	02/02/24 10:20	02/05/24 10:15	0
890-6109-7	BH24-10 1	Solid	02/02/24 10:30	02/05/24 10:15	1
890-6109-8	BH24-11 0	Solid	02/02/24 10:40	02/05/24 10:15	0
890-6109-9	BH24-11 1	Solid	02/02/24 10:50	02/05/24 10:15	1
890-6109-10	BH24-11 2	Solid	02/02/24 11:00	02/05/24 10:15	2

nAPP: 2333213[illegible]

Chain of Custody

eurofins | Environment Testing Xenco

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

Work Order No: 6109

www.xenco.com Page _____ of _____

Project Manager:	Chance Dixon	Bill to: (if different)	Garrett Green
Company Name:	Vertex / XTO	Company Name:	XTO
Address:		Address:	[illegible]
City, State ZIP:		City, State ZIP:	
Phone:	575 988 1472	Email:	

Work Order Comments

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

Project Name:	JRU DI 2	Turn Around	☑ Routine ☐ Rush
Project Number:	23E-06065	Due Date:	
Project Location:	JRU DI 2	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Alvaro Costa		
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	IWM007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	-1.4
Total Containers:		Corrected Temperature:	-1.2

Preservative Codes

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	Pres. Code	Parameters: BTEX (8021)	Parameters: TPH (8015D)	Parameters: [illegible]	Sample Comments
BH24-08 0'	Soil	2-2-24	9:30	0		1					
BH24-08 1'			9:40	1		2					
BH24-09 0'			9:50	0		1					
BH24-09 1'			10:00	1							
BH24-09 2'			10:10	2							
BH24-10 0'			10:20	0							
BH24-10 1'			10:30	1							
BH24-11 0'			10:40	0							
BH24-11 1'			10:50	1							
BH24-11 2'	↓	↓	11:00	2	↓	10		↓	↓	↓	

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

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

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

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Vertex

Job Number: 890-6109-1
SDG Number: 23E-06065

Login Number: 6109
List Number: 1
Creator: Lopez, Abraham

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Vertex

Job Number: 890-6109-1
SDG Number: 23E-06065

Login Number: 6109
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 02/06/24 10:57 AM

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

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Ms. Sally Carttar
Vertex
3101 Boyd Dr
Carlsbad, New Mexico 88220

Generated 5/9/2024 5:09:41 PM

JOB DESCRIPTION

JRU DI 2

JOB NUMBER

885-3745-1

Eurofins Albuquerque
4901 Hawkins NE
Albuquerque NM 87109

See page two for job notes and contact information.

Eurofins Albuquerque

Job Notes

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing South Central, LLC Project Manager.

Authorization

Generated
5/9/2024 5:09:41 PM

Authorized for release by
Andy Freeman, Business Unit Manager
andy.freeman@et.eurofinsus.com
(505)345-3975

Client: Vertex
Project/Site: JRU DI 2

Laboratory Job ID: 885-3745-1

Table of Contents

Definitions/Glossary

Client: Vertex Job ID: 885-3745-1
Project/Site: JRU DI 2

Qualifiers

GC VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high biased.

GC Semi VOA

Qualifier	Qualifier Description
S1-	Surrogate recovery exceeds control limits, low biased.

Glossary

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

Case Narrative

Client: Vertex
Project: JRU DI 2

Job ID: 885-3745-1

Job ID: 885-3745-1 Eurofins Albuquerque

Job Narrative
885-3745-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 5/2/2024 7:55 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 0.3°C.

Gasoline Range Organics
Method 8015D_GRO: Internal standard responses were outside of acceptance limits for the following sample: BH24-26 0ft (885-3745-3). The sample(s) shows evidence of matrix interference.

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

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

Diesel Range Organics
Method 8015D_DRO: The continuing calibration verification (CCV) associated with batch 885-4408 recovered above the upper control limit for Diesel Range Organics [C10-C28]. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: BH24-24 4.25ft (885-3745-1).

Method 8015D_DRO: The following sample was diluted due to the nature of the sample matrix: BH24-26 0ft (885-3745-3). Elevated reporting limits (RLs) are provided.

Method 8015D_DRO: The continuing calibration verification (CCV) associated with batch 885-4500 recovered outside acceptance criteria, low biased, for Di-n-octyl phthalate (Surr). Samples with Di-n-octyl phthalate (Surr) in normal range will still be reported. .The following samples are associated (CCV 885-4500/2) and (CCV 885-4500/8), CCV 885-4500/26.

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

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

Client Sample Results

Client: Vertex
Project/Site: JRU DI 2

Job ID: 885-3745-1

Client Sample ID: BH24-24 4.25ft

Date Collected: 04/30/24 12:00
Date Received: 05/02/24 07:55

Lab Sample ID: 885-3745-1

Matrix: Solid

Method: SW846 8015D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.8		mg/Kg		05/02/24 14:55	05/04/24 06:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*15 - 244*	*05/02/24 14:55*	*05/04/24 06:19*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		05/02/24 14:55	05/04/24 06:19	1
Ethylbenzene	ND		0.048		mg/Kg		05/02/24 14:55	05/04/24 06:19	1
Toluene	ND		0.048		mg/Kg		05/02/24 14:55	05/04/24 06:19	1
Xylenes, Total	ND		0.096		mg/Kg		05/02/24 14:55	05/04/24 06:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*39 - 146*	*05/02/24 14:55*	*05/04/24 06:19*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.1		mg/Kg		05/03/24 11:28	05/04/24 04:12	1
Motor Oil Range Organics [C28-C40]	ND		46		mg/Kg		05/03/24 11:28	05/04/24 04:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*95*		*62 - 134*	*05/03/24 11:28*	*05/04/24 04:12*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**200**		5.0		mg/Kg			05/07/24 19:52	1

Client Sample Results

Client: Vertex
Project/Site: JRU DI 2

Job ID: 885-3745-1

Client Sample ID: BH24-23 2.25ft

Date Collected: 04/30/24 12:15
Date Received: 05/02/24 07:55

Lab Sample ID: 885-3745-2

Matrix: Solid

Method: SW846 8015D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.9		mg/Kg		05/02/24 16:15	05/03/24 11:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*15 - 244*	*05/02/24 16:15*	*05/03/24 11:56*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		05/02/24 16:15	05/03/24 11:56	1
Ethylbenzene	ND		0.049		mg/Kg		05/02/24 16:15	05/03/24 11:56	1
Toluene	ND		0.049		mg/Kg		05/02/24 16:15	05/03/24 11:56	1
Xylenes, Total	ND		0.098		mg/Kg		05/02/24 16:15	05/03/24 11:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*39 - 146*	*05/02/24 16:15*	*05/03/24 11:56*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.7		mg/Kg		05/03/24 13:07	05/06/24 19:24	1
Motor Oil Range Organics [C28-C40]	ND		48		mg/Kg		05/03/24 13:07	05/06/24 19:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*87*		*62 - 134*	*05/03/24 13:07*	*05/06/24 19:24*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**410**		5.0		mg/Kg			05/07/24 19:58	1

Client Sample Results

Client: Vertex
Project/Site: JRU DI 2

Job ID: 885-3745-1

Client Sample ID: BH24-26 0ft

Date Collected: 04/30/24 12:30
Date Received: 05/02/24 07:55

Lab Sample ID: 885-3745-3

Matrix: Solid

Method: SW846 8015D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	68		4.8		mg/Kg		05/02/24 16:15	05/03/24 12:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*529*	*S1+*	*15 - 244*	*05/02/24 16:15*	*05/03/24 12:19*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		05/02/24 16:15	05/03/24 12:19	1
Ethylbenzene	0.37		0.048		mg/Kg		05/02/24 16:15	05/03/24 12:19	1
Toluene	0.20		0.048		mg/Kg		05/02/24 16:15	05/03/24 12:19	1
Xylenes, Total	4.4		0.096		mg/Kg		05/02/24 16:15	05/03/24 12:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*129*		*39 - 146*	*05/02/24 16:15*	*05/03/24 12:19*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	11000		180		mg/Kg		05/03/24 13:07	05/07/24 18:43	20
Motor Oil Range Organics [C28-C40]	4300		900		mg/Kg		05/03/24 13:07	05/07/24 18:43	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*0*	*S1-*	*62 - 134*	*05/03/24 13:07*	*05/07/24 18:43*	*20*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	42		5.0		mg/Kg			05/07/24 20:04	1

Client Sample Results

Client: Vertex
Project/Site: JRU DI 2

Job ID: 885-3745-1

Client Sample ID: BH24-26 2ft

Date Collected: 04/30/24 12:45
Date Received: 05/02/24 07:55

Lab Sample ID: 885-3745-4

Matrix: Solid

Method: SW846 8015D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.9		mg/Kg		05/02/24 16:15	05/03/24 12:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*118*		*15 - 244*	*05/02/24 16:15*	*05/03/24 12:43*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		05/02/24 16:15	05/03/24 12:43	1
Ethylbenzene	ND		0.049		mg/Kg		05/02/24 16:15	05/03/24 12:43	1
Toluene	ND		0.049		mg/Kg		05/02/24 16:15	05/03/24 12:43	1
Xylenes, Total	ND		0.099		mg/Kg		05/02/24 16:15	05/03/24 12:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*39 - 146*	*05/02/24 16:15*	*05/03/24 12:43*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**280**		8.8		mg/Kg		05/03/24 13:07	05/06/24 19:48	1
Motor Oil Range Organics [C28-C40]	**110**		44		mg/Kg		05/03/24 13:07	05/06/24 19:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*88*		*62 - 134*	*05/03/24 13:07*	*05/06/24 19:48*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**64**		5.0		mg/Kg			05/07/24 20:10	1

Client Sample Results

Client: Vertex
Project/Site: JRU DI 2

Job ID: 885-3745-1

Client Sample ID: BH24-26-3ft

Date Collected: 04/30/24 13:00
Date Received: 05/02/24 07:55

Lab Sample ID: 885-3745-5

Matrix: Solid

Method: SW846 8015D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		05/02/24 16:15	05/03/24 13:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*15 - 244*	*05/02/24 16:15*	*05/03/24 13:06*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		05/02/24 16:15	05/03/24 13:06	1
Ethylbenzene	ND		0.050		mg/Kg		05/02/24 16:15	05/03/24 13:06	1
Toluene	ND		0.050		mg/Kg		05/02/24 16:15	05/03/24 13:06	1
Xylenes, Total	ND		0.10		mg/Kg		05/02/24 16:15	05/03/24 13:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*39 - 146*	*05/02/24 16:15*	*05/03/24 13:06*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**57**		8.9		mg/Kg		05/03/24 13:07	05/06/24 20:01	1
Motor Oil Range Organics [C28-C40]	ND		44		mg/Kg		05/03/24 13:07	05/06/24 20:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*101*		*62 - 134*	*05/03/24 13:07*	*05/06/24 20:01*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**53**		5.0		mg/Kg			05/07/24 20:29	1

QC Sample Results

Client: Vertex
Project/Site: JRU DI 2

Job ID: 885-3745-1

Method: 8015D - Gasoline Range Organics (GRO) (GC)

Lab Sample ID: MB 885-4280/1-A
Matrix: Solid
Analysis Batch: 4416

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 4280

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		05/02/24 14:55	05/03/24 20:32	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*15 - 244*	*05/02/24 14:55*	*05/03/24 20:32*	*1*

Lab Sample ID: LCS 885-4280/2-A
Matrix: Solid
Analysis Batch: 4416

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 4280

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics [C6 - C10]			25.0	26.4		mg/Kg		106	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*210*		*15 - 244*

Lab Sample ID: MB 885-4292/1-A
Matrix: Solid
Analysis Batch: 4416

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 4292

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		05/02/24 16:15	05/03/24 11:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*15 - 244*	*05/02/24 16:15*	*05/03/24 11:09*	*1*

Lab Sample ID: LCS 885-4292/3-A
Matrix: Solid
Analysis Batch: 4416

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 4292

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics [C6 - C10]			25.0	25.9		mg/Kg		104	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*204*		*15 - 244*

Lab Sample ID: 885-3745-2 MS
Matrix: Solid
Analysis Batch: 4416

Client Sample ID: BH24-23 2.25ft
Prep Type: Total/NA
Prep Batch: 4292

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics [C6 - C10]	ND		24.4	27.2		mg/Kg		112	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*219*		*15 - 244*

QC Sample Results

Client: Vertex
Project/Site: JRU DI 2

Job ID: 885-3745-1

Method: 8015D - Gasoline Range Organics (GRO) (GC) (Continued)

Lab Sample ID: 885-3745-2 MSD
Matrix: Solid
Analysis Batch: 4416

Client Sample ID: BH24-23 2.25ft
Prep Type: Total/NA
Prep Batch: 4292

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics [C6 - C10]	ND		24.3	26.9		mg/Kg		111	70 - 130	1	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*215*		*15 - 244*

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 885-4280/1-A
Matrix: Solid
Analysis Batch: 4418

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 4280

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		05/02/24 14:55	05/03/24 20:32	1
Ethylbenzene	ND		0.050		mg/Kg		05/02/24 14:55	05/03/24 20:32	1
Toluene	ND		0.050		mg/Kg		05/02/24 14:55	05/03/24 20:32	1
Xylenes, Total	ND		0.10		mg/Kg		05/02/24 14:55	05/03/24 20:32	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*39 - 146*	*05/02/24 14:55*	*05/03/24 20:32*	*1*

Lab Sample ID: LCS 885-4280/3-A
Matrix: Solid
Analysis Batch: 4418

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 4280

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			1.00	0.966		mg/Kg		97	70 - 130		
Ethylbenzene			1.00	0.903		mg/Kg		90	70 - 130		
m,p-Xylene			2.00	1.82		mg/Kg		91	70 - 130		
o-Xylene			1.00	0.887		mg/Kg		89	70 - 130		
Toluene			1.00	0.902		mg/Kg		90	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*39 - 146*

Lab Sample ID: MB 885-4292/1-A
Matrix: Solid
Analysis Batch: 4418

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 4292

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		05/02/24 16:15	05/03/24 11:09	1
Ethylbenzene	ND		0.050		mg/Kg		05/02/24 16:15	05/03/24 11:09	1
Toluene	ND		0.050		mg/Kg		05/02/24 16:15	05/03/24 11:09	1
Xylenes, Total	ND		0.10		mg/Kg		05/02/24 16:15	05/03/24 11:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*39 - 146*	*05/02/24 16:15*	*05/03/24 11:09*	*1*

QC Sample Results

Client: Vertex
Project/Site: JRU DI 2

Job ID: 885-3745-1

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

Lab Sample ID: LCS 885-4292/4-A
Matrix: Solid
Analysis Batch: 4418

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 4292

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			1.00	0.966		mg/Kg		97	70 - 130		
Ethylbenzene			1.00	0.922		mg/Kg		92	70 - 130		
m,p-Xylene			2.00	1.88		mg/Kg		94	70 - 130		
o-Xylene			1.00	0.918		mg/Kg		92	70 - 130		
Toluene			1.00	0.919		mg/Kg		92	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*39 - 146*

Lab Sample ID: 885-3745-3 MS
Matrix: Solid
Analysis Batch: 4418

Client Sample ID: BH24-26 0ft
Prep Type: Total/NA
Prep Batch: 4292

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	ND		0.959	1.02		mg/Kg		107	70 - 130		
Ethylbenzene	0.37		0.959	1.39		mg/Kg		107	70 - 130		
m,p-Xylene	3.1		1.92	5.19		mg/Kg		109	70 - 130		
o-Xylene	1.3		0.959	2.41		mg/Kg		117	70 - 130		
Toluene	0.20		0.959	1.19		mg/Kg		103	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*131*		*39 - 146*

Lab Sample ID: 885-3745-3 MSD
Matrix: Solid
Analysis Batch: 4418

Client Sample ID: BH24-26 0ft
Prep Type: Total/NA
Prep Batch: 4292

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	ND		0.962	1.01		mg/Kg		105	70 - 130	1	20
Ethylbenzene	0.37		0.962	1.40		mg/Kg		107	70 - 130	1	20
m,p-Xylene	3.1		1.92	5.21		mg/Kg		110	70 - 130	0	20
o-Xylene	1.3		0.962	2.42		mg/Kg		117	70 - 130	0	20
Toluene	0.20		0.962	1.22		mg/Kg		105	70 - 130	2	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*129*		*39 - 146*

Method: 8015D - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 885-4338/1-A
Matrix: Solid
Analysis Batch: 4408

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 4338

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10		mg/Kg		05/03/24 11:28	05/03/24 19:07	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		05/03/24 11:28	05/03/24 19:07	1

QC Sample Results

Client: Vertex
Project/Site: JRU DI 2

Job ID: 885-3745-1

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

Lab Sample ID: MB 885-4338/1-A
Matrix: Solid
Analysis Batch: 4408

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 4338

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	89		62 - 134	05/03/24 11:28	05/03/24 19:07	1

Lab Sample ID: LCS 885-4338/2-A
Matrix: Solid
Analysis Batch: 4408

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 4338

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics [C10-C28]			50.0	49.0		mg/Kg		98	60 - 135		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Di-n-octyl phthalate (Surr)	115		62 - 134

Lab Sample ID: 885-3745-1 MS
Matrix: Solid
Analysis Batch: 4499

Client Sample ID: BH24-24 4.25ft
Prep Type: Total/NA
Prep Batch: 4338

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics [C10-C28]	ND		46.2	48.4		mg/Kg		105	44 - 136		

Surrogate	MS %Recovery	MS Qualifier	Limits
Di-n-octyl phthalate (Surr)	128		62 - 134

Lab Sample ID: 885-3745-1 MSD
Matrix: Solid
Analysis Batch: 4499

Client Sample ID: BH24-24 4.25ft
Prep Type: Total/NA
Prep Batch: 4338

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	ND		46.3	49.3		mg/Kg		107	44 - 136	2	32

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Di-n-octyl phthalate (Surr)	133		62 - 134

Lab Sample ID: MB 885-4349/1-A
Matrix: Solid
Analysis Batch: 4444

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 4349

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10		mg/Kg		05/03/24 13:07	05/06/24 15:11	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		05/03/24 13:07	05/06/24 15:11	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	95		62 - 134	05/03/24 13:07	05/06/24 15:11	1

QC Sample Results

Client: Vertex
Project/Site: JRU DI 2

Job ID: 885-3745-1

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

Lab Sample ID: LCS 885-4349/2-A
Matrix: Solid
Analysis Batch: 4444

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 4349

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics [C10-C28]			50.0	39.2		mg/Kg		78	60 - 135		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Di-n-octyl phthalate (Surr)	*112*		*62 - 134*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-80168/1-A
Matrix: Solid
Analysis Batch: 80184

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		5.0		mg/Kg			05/07/24 18:26	1

Lab Sample ID: LCS 880-80168/2-A
Matrix: Solid
Analysis Batch: 80184

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	244		mg/Kg		97	90 - 110		

Lab Sample ID: LCSD 880-80168/3-A
Matrix: Solid
Analysis Batch: 80184

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	244		mg/Kg		97	90 - 110	0	20

Lab Sample ID: 885-3745-4 MS
Matrix: Solid
Analysis Batch: 80184

Client Sample ID: BH24-26 2ft
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	64		252	311		mg/Kg		98	90 - 110		

Lab Sample ID: 885-3745-4 MSD
Matrix: Solid
Analysis Batch: 80184

Client Sample ID: BH24-26 2ft
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	64		252	311		mg/Kg		98	90 - 110	0	20

QC Association Summary

Client: Vertex
Project/Site: JRU DI 2

Job ID: 885-3745-1

GC VOA

Prep Batch: 4280

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3745-1	BH24-24 4.25ft	Total/NA	Solid	5030C	
MB 885-4280/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 885-4280/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCS 885-4280/3-A	Lab Control Sample	Total/NA	Solid	5030C	

Prep Batch: 4292

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3745-2	BH24-23 2.25ft	Total/NA	Solid	5030C	
885-3745-3	BH24-26 0ft	Total/NA	Solid	5030C	
885-3745-4	BH24-26 2ft	Total/NA	Solid	5030C	
885-3745-5	BH24-26-3ft	Total/NA	Solid	5030C	
MB 885-4292/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 885-4292/3-A	Lab Control Sample	Total/NA	Solid	5030C	
LCS 885-4292/4-A	Lab Control Sample	Total/NA	Solid	5030C	
885-3745-2 MS	BH24-23 2.25ft	Total/NA	Solid	5030C	
885-3745-2 MSD	BH24-23 2.25ft	Total/NA	Solid	5030C	
885-3745-3 MS	BH24-26 0ft	Total/NA	Solid	5030C	
885-3745-3 MSD	BH24-26 0ft	Total/NA	Solid	5030C	

Analysis Batch: 4416

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3745-1	BH24-24 4.25ft	Total/NA	Solid	8015D	4280
885-3745-2	BH24-23 2.25ft	Total/NA	Solid	8015D	4292
885-3745-3	BH24-26 0ft	Total/NA	Solid	8015D	4292
885-3745-4	BH24-26 2ft	Total/NA	Solid	8015D	4292
885-3745-5	BH24-26-3ft	Total/NA	Solid	8015D	4292
MB 885-4280/1-A	Method Blank	Total/NA	Solid	8015D	4280
MB 885-4292/1-A	Method Blank	Total/NA	Solid	8015D	4292
LCS 885-4280/2-A	Lab Control Sample	Total/NA	Solid	8015D	4280
LCS 885-4292/3-A	Lab Control Sample	Total/NA	Solid	8015D	4292
885-3745-2 MS	BH24-23 2.25ft	Total/NA	Solid	8015D	4292
885-3745-2 MSD	BH24-23 2.25ft	Total/NA	Solid	8015D	4292

Analysis Batch: 4418

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3745-1	BH24-24 4.25ft	Total/NA	Solid	8021B	4280
885-3745-2	BH24-23 2.25ft	Total/NA	Solid	8021B	4292
885-3745-3	BH24-26 0ft	Total/NA	Solid	8021B	4292
885-3745-4	BH24-26 2ft	Total/NA	Solid	8021B	4292
885-3745-5	BH24-26-3ft	Total/NA	Solid	8021B	4292
MB 885-4280/1-A	Method Blank	Total/NA	Solid	8021B	4280
MB 885-4292/1-A	Method Blank	Total/NA	Solid	8021B	4292
LCS 885-4280/3-A	Lab Control Sample	Total/NA	Solid	8021B	4280
LCS 885-4292/4-A	Lab Control Sample	Total/NA	Solid	8021B	4292
885-3745-3 MS	BH24-26 0ft	Total/NA	Solid	8021B	4292
885-3745-3 MSD	BH24-26 0ft	Total/NA	Solid	8021B	4292

QC Association Summary

Client: Vertex
Project/Site: JRU DI 2

Job ID: 885-3745-1

GC Semi VOA

Prep Batch: 4338

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3745-1	BH24-24 4.25ft	Total/NA	Solid	SHAKE	
MB 885-4338/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-4338/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	
885-3745-1 MS	BH24-24 4.25ft	Total/NA	Solid	SHAKE	
885-3745-1 MSD	BH24-24 4.25ft	Total/NA	Solid	SHAKE	

Prep Batch: 4349

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3745-2	BH24-23 2.25ft	Total/NA	Solid	SHAKE	
885-3745-3	BH24-26 0ft	Total/NA	Solid	SHAKE	
885-3745-4	BH24-26 2ft	Total/NA	Solid	SHAKE	
885-3745-5	BH24-26-3ft	Total/NA	Solid	SHAKE	
MB 885-4349/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-4349/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	

Analysis Batch: 4408

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3745-1	BH24-24 4.25ft	Total/NA	Solid	8015D	4338
MB 885-4338/1-A	Method Blank	Total/NA	Solid	8015D	4338
LCS 885-4338/2-A	Lab Control Sample	Total/NA	Solid	8015D	4338

Analysis Batch: 4444

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3745-2	BH24-23 2.25ft	Total/NA	Solid	8015D	4349
885-3745-4	BH24-26 2ft	Total/NA	Solid	8015D	4349
885-3745-5	BH24-26-3ft	Total/NA	Solid	8015D	4349
MB 885-4349/1-A	Method Blank	Total/NA	Solid	8015D	4349
LCS 885-4349/2-A	Lab Control Sample	Total/NA	Solid	8015D	4349

Analysis Batch: 4499

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3745-1 MS	BH24-24 4.25ft	Total/NA	Solid	8015D	4338
885-3745-1 MSD	BH24-24 4.25ft	Total/NA	Solid	8015D	4338

Analysis Batch: 4500

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3745-3	BH24-26 0ft	Total/NA	Solid	8015D	4349

HPLC/IC

Leach Batch: 80168

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3745-1	BH24-24 4.25ft	Soluble	Solid	DI Leach	
885-3745-2	BH24-23 2.25ft	Soluble	Solid	DI Leach	
885-3745-3	BH24-26 0ft	Soluble	Solid	DI Leach	
885-3745-4	BH24-26 2ft	Soluble	Solid	DI Leach	
885-3745-5	BH24-26-3ft	Soluble	Solid	DI Leach	
MB 880-80168/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-80168/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-80168/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
885-3745-4 MS	BH24-26 2ft	Soluble	Solid	DI Leach	

QC Association Summary

Client: Vertex
Project/Site: JRU DI 2

Job ID: 885-3745-1

HPLC/IC (Continued)

Leach Batch: 80168 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3745-4 MSD	BH24-26 2ft	Soluble	Solid	DI Leach	

Analysis Batch: 80184

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3745-1	BH24-24 4.25ft	Soluble	Solid	300.0	80168
885-3745-2	BH24-23 2.25ft	Soluble	Solid	300.0	80168
885-3745-3	BH24-26 0ft	Soluble	Solid	300.0	80168
885-3745-4	BH24-26 2ft	Soluble	Solid	300.0	80168
885-3745-5	BH24-26-3ft	Soluble	Solid	300.0	80168
MB 880-80168/1-A	Method Blank	Soluble	Solid	300.0	80168
LCS 880-80168/2-A	Lab Control Sample	Soluble	Solid	300.0	80168
LCSD 880-80168/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	80168
885-3745-4 MS	BH24-26 2ft	Soluble	Solid	300.0	80168
885-3745-4 MSD	BH24-26 2ft	Soluble	Solid	300.0	80168

Lab Chronicle

Client: Vertex
Job ID: 885-3745-1
Project/Site: JRU DI 2

Client Sample ID: BH24-24 4.25ft
Lab Sample ID: 885-3745-1
Date Collected: 04/30/24 12:00
Matrix: Solid
Date Received: 05/02/24 07:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			4280	JP	EET ALB	05/02/24 14:55
Total/NA	Analysis	8015D		1	4416	JP	EET ALB	05/04/24 06:19
Total/NA	Prep	5030C			4280	JP	EET ALB	05/02/24 14:55
Total/NA	Analysis	8021B		1	4418	JP	EET ALB	05/04/24 06:19
Total/NA	Prep	SHAKE			4338	DH	EET ALB	05/03/24 11:28
Total/NA	Analysis	8015D		1	4408	JU	EET ALB	05/04/24 04:12
Soluble	Leach	DI Leach			80168	SA	EET MID	05/07/24 13:37
Soluble	Analysis	300.0		1	80184	SMC	EET MID	05/07/24 19:52

Client Sample ID: BH24-23 2.25ft
Lab Sample ID: 885-3745-2
Date Collected: 04/30/24 12:15
Matrix: Solid
Date Received: 05/02/24 07:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			4292	JP	EET ALB	05/02/24 16:15
Total/NA	Analysis	8015D		1	4416	JP	EET ALB	05/03/24 11:56
Total/NA	Prep	5030C			4292	JP	EET ALB	05/02/24 16:15
Total/NA	Analysis	8021B		1	4418	JP	EET ALB	05/03/24 11:56
Total/NA	Prep	SHAKE			4349	DH	EET ALB	05/03/24 13:07
Total/NA	Analysis	8015D		1	4444	JU	EET ALB	05/06/24 19:24
Soluble	Leach	DI Leach			80168	SA	EET MID	05/07/24 13:37
Soluble	Analysis	300.0		1	80184	SMC	EET MID	05/07/24 19:58

Client Sample ID: BH24-26 0ft
Lab Sample ID: 885-3745-3
Date Collected: 04/30/24 12:30
Matrix: Solid
Date Received: 05/02/24 07:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			4292	JP	EET ALB	05/02/24 16:15
Total/NA	Analysis	8015D		1	4416	JP	EET ALB	05/03/24 12:19
Total/NA	Prep	5030C			4292	JP	EET ALB	05/02/24 16:15
Total/NA	Analysis	8021B		1	4418	JP	EET ALB	05/03/24 12:19
Total/NA	Prep	SHAKE			4349	DH	EET ALB	05/03/24 13:07
Total/NA	Analysis	8015D		20	4500	JU	EET ALB	05/07/24 18:43
Soluble	Leach	DI Leach			80168	SA	EET MID	05/07/24 13:37
Soluble	Analysis	300.0		1	80184	SMC	EET MID	05/07/24 20:04

Client Sample ID: BH24-26 2ft
Lab Sample ID: 885-3745-4
Date Collected: 04/30/24 12:45
Matrix: Solid
Date Received: 05/02/24 07:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			4292	JP	EET ALB	05/02/24 16:15
Total/NA	Analysis	8015D		1	4416	JP	EET ALB	05/03/24 12:43

Lab Chronicle

Client: Vertex
Project/Site: JRU DI 2

Job ID: 885-3745-1

Client Sample ID: BH24-26 2ft

Lab Sample ID: 885-3745-4

Date Collected: 04/30/24 12:45
Matrix: Solid
Date Received: 05/02/24 07:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			4292	JP	EET ALB	05/02/24 16:15
Total/NA	Analysis	8021B		1	4418	JP	EET ALB	05/03/24 12:43
Total/NA	Prep	SHAKE			4349	DH	EET ALB	05/03/24 13:07
Total/NA	Analysis	8015D		1	4444	JU	EET ALB	05/06/24 19:48
Soluble	Leach	DI Leach			80168	SA	EET MID	05/07/24 13:37
Soluble	Analysis	300.0		1	80184	SMC	EET MID	05/07/24 20:10

Client Sample ID: BH24-26-3ft

Lab Sample ID: 885-3745-5

Date Collected: 04/30/24 13:00
Matrix: Solid
Date Received: 05/02/24 07:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			4292	JP	EET ALB	05/02/24 16:15
Total/NA	Analysis	8015D		1	4416	JP	EET ALB	05/03/24 13:06
Total/NA	Prep	5030C			4292	JP	EET ALB	05/02/24 16:15
Total/NA	Analysis	8021B		1	4418	JP	EET ALB	05/03/24 13:06
Total/NA	Prep	SHAKE			4349	DH	EET ALB	05/03/24 13:07
Total/NA	Analysis	8015D		1	4444	JU	EET ALB	05/06/24 20:01
Soluble	Leach	DI Leach			80168	SA	EET MID	05/07/24 13:37
Soluble	Analysis	300.0		1	80184	SMC	EET MID	05/07/24 20:29

Laboratory References:

EET ALB = Eurofins Albuquerque, 4901 Hawkins NE, Albuquerque, NM 87109, TEL (505)345-3975

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

Accreditation/Certification Summary

Client: Vertex
Project/Site: JRU DI 2

Job ID: 885-3745-1

Laboratory: Eurofins Albuquerque

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

Authority	Program	Identification Number	Expiration Date
New Mexico	State	NM9425, NM0901	02-26-25

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

Analysis Method	Prep Method	Matrix	Analyte
8015D	5030C	Solid	Gasoline Range Organics [C6 - C10]
8015D	SHAKE	Solid	Diesel Range Organics [C10-C28]
8015D	SHAKE	Solid	Motor Oil Range Organics [C28-C40]
8021B	5030C	Solid	Benzene
8021B	5030C	Solid	Ethylbenzene
8021B	5030C	Solid	Toluene
8021B	5030C	Solid	Xylenes, Total

Oregon	NELAP	NM100001	02-26-25

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

Analysis Method	Prep Method	Matrix	Analyte
8015D	5030C	Solid	Gasoline Range Organics [C6 - C10]
8015D	SHAKE	Solid	Diesel Range Organics [C10-C28]
8015D	SHAKE	Solid	Motor Oil Range Organics [C28-C40]
8021B	5030C	Solid	Benzene
8021B	5030C	Solid	Ethylbenzene
8021B	5030C	Solid	Toluene
8021B	5030C	Solid	Xylenes, Total

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24

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

Analysis Method	Prep Method	Matrix	Analyte
300.0		Solid	Chloride

Chain-of-Custody Record

Client Vertex (XTO)

Mailing Address On File

Phone # On File

email or Fax# Scarttar@vertex ca

QA/QC Package
☐ Standard ☐ Level 4 (Full Validation)

Accreditation ☐ Az Compliance
☐ NELAC ☐ Other
☐ EDD (Type)

Turn-Around Time
☑ Standard ☑ Rush 5 Day

Project Name JRU DI 2

Project # 06065

Project Manager Sally Carttar

Sampler Wyatt Wadleigh
On Ice: ☐ Yes ☐ No
# of Coolers: 1 Yoa:
Cooler Temp (Including CF) 0.3-0=0.3

HALL ENVIRONMENTAL ANALYSIS LABORA
www hallenvironmental com
4901 Hawkins NE - Albuquerque, NM 8710
Tel 505-345-3975 Fax 505-345-4107

885-3745 COC

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	BTEX / MTBE / TMB's (8021)	TPH 8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504 1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
04/30/24	12 00	Soil	BH24-24 4 25 ft	1, 4oz jar		1	X	X					X			
04/30/24	12 15	Soil	BH24-23 2 25 ft	1, 4oz jar		2	X	X					X			
04/30/24	12 30	Soil	BH24-26 0ft	1, 4oz jar		3	X	X					X			
04/30/24	12 45	Soil	BH24-26 2ft	1, 4oz jar		4	X	X					X			
04/30/24	13 00	Soil	BH24-26-3 ft	1, 4oz jar		5	X	X					X			

Date	Time	Relinquished by	Received by	Via	Date	Time
		Wyatt Wadleigh			5/1/24	1145
5/1/24	1900			Courier	5/2/24	7:55

Remarks Please CC wwadleigh@vertex ca
Cost center Number 1082251008

If necessary samples submitted to Hall Environmental may be subcontracted to other accredited laboratories This serves as notice of this possibility Any sub-contracted data will be clearly notated on the analytical report.

Eurofins Albuquerque
4901 Hawkins NE
Albuquerque NM 87109
Phone 505-345-3975 Fax: 505-345-4107

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler	Lab PM: Freeman, Andy	Carrier Tracking No(s)	COC No: 885-584 1
Client Contact: Shipping/Receiving	Phone	E-Mail: andy freeman@et.eurofinsus.com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Environment Testing South Centr		Accreditations Required (See note): NELAP - Oregon NELAP - Texas, State - New Mexico		Job #: 885-3745-1
Address: 1211 W Florida Ave,	Due Date Requested: 5/8/2024			
City: Midland	TAT Requested (days):			
State Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email:	WO #:			
Project Name: JRU DI 2	Project #: 88501279			
Site	SSOW#:			

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	300_ORGFM_28D/DI_LEACH Chloride	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
BH24-24 4 25ft (885-3745-1)	4/30/24	12 00 Mountain		Solid			X	1	
BH24-23 2 25ft (885-3745-2)	4/30/24	12 15 Mountain		Solid			X	1	
BH24-26 0ft (885-3745-3)	4/30/24	12 30 Mountain		Solid			X	1	
BH24-26 2ft (885-3745-4)	4/30/24	12 45 Mountain		Solid			X	1	
BH24-26-3ft (885-3745-5)	4/30/24	13 00 Mountain		Solid			X	1	

Preservation Codes — Other:

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing South Central, LLC places the ownership of method, analyte & accreditation compliance upon our 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/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing South Central LLC laboratory or other instructions will be provided Any changes to accreditation status should be brought to Eurofins Environment Testing South Central, LLC attention immediately If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing South Central LLC.

Possible Hazard Identification: Unconfirmed	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested I, II III, IV, Other (specify) Primary Deliverable Rank 2	Special Instructions/QC Requirements

Empty Kit Relinquished by:	Date	Time	Method of Shipment:

Relinquished by:	Date/Time: 5/6/24 1332	Company	Received by:	Date/Time: 5/7/24 1133	Company
Relinquished by:	Date/Time	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time	Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.	Cooler Temperature(s) °C and Other Remarks.

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: Vertex Job Number: 885-3745-1

Login Number: 3745 **List Source: Eurofins Albuquerque**
List Number: 1
Creator: Casarrubias, Tracy

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

Login Sample Receipt Checklist

Client: Vertex Job Number: 885-3745-1

Login Number: 3745 **List Source: Eurofins Midland**
List Number: 2 **List Creation: 05/07/24 11:30 AM**
Creator: Vasquez, Julisa

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

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Ms. Sally Carttar
Vertex
3101 Boyd Dr
Carlsbad, New Mexico 88220

Generated 7/10/2024 11:14:56 AM

JOB DESCRIPTION

JRU D12

JOB NUMBER

885-7006-1

Eurofins Albuquerque
4901 Hawkins NE
Albuquerque NM 87109

See page two for job notes and contact information.

Eurofins Albuquerque

Job Notes

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing South Central, LLC Project Manager.

Authorization

Generated
7/10/2024 11:14:56 AM

Authorized for release by
Andy Freeman, Business Unit Manager
andy.freeman@et.eurofinsus.com
(505)345-3975

Client: Vertex
Project/Site: JRU D12

Laboratory Job ID: 885-7006-1

Table of Contents

Definitions/Glossary

Client: Vertex Job ID: 885-7006-1
Project/Site: JRU D12

Qualifiers

GC VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high biased.

Glossary

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

Case Narrative

Client: Vertex
Project: JRU D12

Job ID: 885-7006-1

Job ID: 885-7006-1 Eurofins Albuquerque

Job Narrative
885-7006-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 6/27/2024 7:30 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 0.3°C.

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

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

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

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

Client Sample Results

Client: Vertex
Project/Site: JRU D12

Job ID: 885-7006-1

Client Sample ID: BH24-27 0.0'

Date Collected: 06/25/24 09:30
Date Received: 06/27/24 07:30

Lab Sample ID: 885-7006-1

Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		4.8		mg/Kg		06/27/24 13:48	07/04/24 08:10	1

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*35 - 166*	*06/27/24 13:48*	*07/04/24 08:10*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		06/27/24 13:48	07/05/24 10:12	1
Ethylbenzene	ND		0.048		mg/Kg		06/27/24 13:48	07/05/24 10:12	1
Toluene	ND		0.048		mg/Kg		06/27/24 13:48	07/05/24 10:12	1
Xylenes, Total	ND		0.097		mg/Kg		06/27/24 13:48	07/05/24 10:12	1

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*48 - 145*	*06/27/24 13:48*	*07/05/24 10:12*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.7		mg/Kg		07/01/24 08:38	07/01/24 12:01	1
Motor Oil Range Organics [C28-C40]	ND		48		mg/Kg		07/01/24 08:38	07/01/24 12:01	1

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*101*		*62 - 134*	*07/01/24 08:38*	*07/01/24 12:01*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		60		mg/Kg		06/28/24 09:56	06/28/24 21:09	20

Client Sample Results

Client: Vertex
Project/Site: JRU D12

Job ID: 885-7006-1

Client Sample ID: BH24-27 1.0'

Date Collected: 06/25/24 10:30
Date Received: 06/27/24 07:30

Lab Sample ID: 885-7006-2

Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		5.0		mg/Kg		06/27/24 13:48	07/04/24 08:34	1

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*35 - 166*	*06/27/24 13:48*	*07/04/24 08:34*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		06/27/24 13:48	07/05/24 10:35	1
Ethylbenzene	ND		0.050		mg/Kg		06/27/24 13:48	07/05/24 10:35	1
Toluene	ND		0.050		mg/Kg		06/27/24 13:48	07/05/24 10:35	1
Xylenes, Total	ND		0.10		mg/Kg		06/27/24 13:48	07/05/24 10:35	1

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*48 - 145*	*06/27/24 13:48*	*07/05/24 10:35*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.9		mg/Kg		07/01/24 08:38	07/01/24 12:14	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		07/01/24 08:38	07/01/24 12:14	1

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*101*		*62 - 134*	*07/01/24 08:38*	*07/01/24 12:14*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**73**		60		mg/Kg		06/28/24 09:56	06/28/24 21:22	20

QC Sample Results

Client: Vertex
Project/Site: JRU D12

Job ID: 885-7006-1

Method: 8015M/D - Gasoline Range Organics (GRO) (GC)

Lab Sample ID: MB 885-7510/1-A
Matrix: Solid
Analysis Batch: 7896

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 7510

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		5.0		mg/Kg		06/27/24 13:48	07/04/24 02:42	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*35 - 166*	*06/27/24 13:48*	*07/04/24 02:42*	*1*

Lab Sample ID: LCS 885-7510/2-A
Matrix: Solid
Analysis Batch: 7896

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 7510

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			25.0	24.6		mg/Kg		98	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*207*	*S1+*	*35 - 166*

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 885-7510/1-A
Matrix: Solid
Analysis Batch: 7897

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 7510

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		06/27/24 13:48	07/04/24 02:42	1
Ethylbenzene	ND		0.050		mg/Kg		06/27/24 13:48	07/04/24 02:42	1
Toluene	ND		0.050		mg/Kg		06/27/24 13:48	07/04/24 02:42	1
Xylenes, Total	ND		0.10		mg/Kg		06/27/24 13:48	07/04/24 02:42	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*48 - 145*	*06/27/24 13:48*	*07/04/24 02:42*	*1*

Lab Sample ID: LCS 885-7510/3-A
Matrix: Solid
Analysis Batch: 7897

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 7510

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			1.00	0.872		mg/Kg		87	70 - 130		
Ethylbenzene			1.00	0.837		mg/Kg		84	70 - 130		
m-Xylene & p-Xylene			2.00	1.69		mg/Kg		84	70 - 130		
o-Xylene			1.00	0.825		mg/Kg		83	70 - 130		
Toluene			1.00	0.817		mg/Kg		82	70 - 130		
Xylenes, Total			3.00	2.51		mg/Kg		84	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*91*		*48 - 145*

QC Sample Results

Client: Vertex
Project/Site: JRU D12

Job ID: 885-7006-1

Method: 8015M/D - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 885-7664/1-A
Matrix: Solid
Analysis Batch: 7694

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 7664

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10		mg/Kg		07/01/24 08:38	07/01/24 10:07	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		07/01/24 08:38	07/01/24 10:07	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*100*		*62 - 134*	*07/01/24 08:38*	*07/01/24 10:07*	*1*

Lab Sample ID: LCS 885-7664/2-A
Matrix: Solid
Analysis Batch: 7694

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 7664

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics [C10-C28]			50.0	54.9		mg/Kg		110	60 - 135		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Di-n-octyl phthalate (Surr)	*113*		*62 - 134*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 885-7593/1-A
Matrix: Solid
Analysis Batch: 7597

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 7593

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0		mg/Kg		06/28/24 09:56	06/28/24 16:59	1

Lab Sample ID: LCS 885-7593/2-A
Matrix: Solid
Analysis Batch: 7597

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 7593

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			30.0	27.9		mg/Kg		93	90 - 110		

QC Association Summary

Client: Vertex
Project/Site: JRU D12

Job ID: 885-7006-1

GC VOA

Prep Batch: 7510

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7006-1	BH24-27 0.0'	Total/NA	Solid	5030C	
885-7006-2	BH24-27 1.0'	Total/NA	Solid	5030C	
MB 885-7510/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 885-7510/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCS 885-7510/3-A	Lab Control Sample	Total/NA	Solid	5030C	

Analysis Batch: 7896

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7006-1	BH24-27 0.0'	Total/NA	Solid	8015M/D	7510
885-7006-2	BH24-27 1.0'	Total/NA	Solid	8015M/D	7510
MB 885-7510/1-A	Method Blank	Total/NA	Solid	8015M/D	7510
LCS 885-7510/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	7510

Analysis Batch: 7897

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 885-7510/1-A	Method Blank	Total/NA	Solid	8021B	7510
LCS 885-7510/3-A	Lab Control Sample	Total/NA	Solid	8021B	7510

Analysis Batch: 7946

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7006-1	BH24-27 0.0'	Total/NA	Solid	8021B	7510
885-7006-2	BH24-27 1.0'	Total/NA	Solid	8021B	7510

GC Semi VOA

Prep Batch: 7664

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7006-1	BH24-27 0.0'	Total/NA	Solid	SHAKE	
885-7006-2	BH24-27 1.0'	Total/NA	Solid	SHAKE	
MB 885-7664/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-7664/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	

Analysis Batch: 7694

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7006-1	BH24-27 0.0'	Total/NA	Solid	8015M/D	7664
885-7006-2	BH24-27 1.0'	Total/NA	Solid	8015M/D	7664
MB 885-7664/1-A	Method Blank	Total/NA	Solid	8015M/D	7664
LCS 885-7664/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	7664

HPLC/IC

Prep Batch: 7593

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7006-1	BH24-27 0.0'	Total/NA	Solid	300_Prep	
885-7006-2	BH24-27 1.0'	Total/NA	Solid	300_Prep	
MB 885-7593/1-A	Method Blank	Total/NA	Solid	300_Prep	
LCS 885-7593/2-A	Lab Control Sample	Total/NA	Solid	300_Prep	

Analysis Batch: 7597

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7006-1	BH24-27 0.0'	Total/NA	Solid	300.0	7593
885-7006-2	BH24-27 1.0'	Total/NA	Solid	300.0	7593

QC Association Summary

Client: Vertex
Project/Site: JRU D12

Job ID: 885-7006-1

HPLC/IC (Continued)

Analysis Batch: 7597 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 885-7593/1-A	Method Blank	Total/NA	Solid	300.0	7593
LCS 885-7593/2-A	Lab Control Sample	Total/NA	Solid	300.0	7593

Lab Chronicle

Client: Vertex
Project/Site: JRU D12

Job ID: 885-7006-1

Client Sample ID: BH24-27 0.0'

Lab Sample ID: 885-7006-1
Matrix: Solid
Date Collected: 06/25/24 09:30
Date Received: 06/27/24 07:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7510	AT	EET ALB	06/27/24 13:48
Total/NA	Analysis	8015M/D		1	7896	JP	EET ALB	07/04/24 08:10
Total/NA	Prep	5030C			7510	AT	EET ALB	06/27/24 13:48
Total/NA	Analysis	8021B		1	7946	JP	EET ALB	07/05/24 10:12
Total/NA	Prep	SHAKE			7664	KR	EET ALB	07/01/24 08:38
Total/NA	Analysis	8015M/D		1	7694	DH	EET ALB	07/01/24 12:01
Total/NA	Prep	300_Prep			7593	RC	EET ALB	06/28/24 09:56
Total/NA	Analysis	300.0		20	7597	RC	EET ALB	06/28/24 21:09

Client Sample ID: BH24-27 1.0'

Lab Sample ID: 885-7006-2
Matrix: Solid
Date Collected: 06/25/24 10:30
Date Received: 06/27/24 07:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7510	AT	EET ALB	06/27/24 13:48
Total/NA	Analysis	8015M/D		1	7896	JP	EET ALB	07/04/24 08:34
Total/NA	Prep	5030C			7510	AT	EET ALB	06/27/24 13:48
Total/NA	Analysis	8021B		1	7946	JP	EET ALB	07/05/24 10:35
Total/NA	Prep	SHAKE			7664	KR	EET ALB	07/01/24 08:38
Total/NA	Analysis	8015M/D		1	7694	DH	EET ALB	07/01/24 12:14
Total/NA	Prep	300_Prep			7593	RC	EET ALB	06/28/24 09:56
Total/NA	Analysis	300.0		20	7597	RC	EET ALB	06/28/24 21:22

Laboratory References:

EET ALB = Eurofins Albuquerque, 4901 Hawkins NE, Albuquerque, NM 87109, TEL (505)345-3975

Accreditation/Certification Summary

Client: Vertex
Project/Site: JRU D12

Job ID: 885-7006-1

Laboratory: Eurofins Albuquerque

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

Authority	Program	Identification Number	Expiration Date
New Mexico	State	NM9425, NM0901	02-26-25

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

Analysis Method	Prep Method	Matrix	Analyte
300.0	300_Prep	Solid	Chloride
8015M/D	5030C	Solid	Gasoline Range Organics (GRO)-C6-C10
8015M/D	SHAKE	Solid	Diesel Range Organics [C10-C28]
8015M/D	SHAKE	Solid	Motor Oil Range Organics [C28-C40]
8021B	5030C	Solid	Benzene
8021B	5030C	Solid	Ethylbenzene
8021B	5030C	Solid	Toluene
8021B	5030C	Solid	Xylenes, Total

Oregon	NELAP	NM100001	02-26-25

Chain-of-Custody Record

Client: Vertex (XTO)

Mailing Address: On File

Phone #:

email or Fax#:

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time: 5-Day
☐ Standard ☒ Rush

Project Name: JRU D12

Project #: 23E-06065

Project Manager: Sally Carttar

Sampler: AL

On Ice: ☒ Yes ☐ No

# of Coolers: 1 Yoyi

Cooler Temp(including CF): 0.2+0.1=0.3 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com 885-7006 COC
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	BTEX / MTBE / TMB's (8021)	TPH 8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
06/25/24	0930	soil	BH24-27 0.0'	4 oz	ICE											
↓	1030	↓	BH24-27 1.0'	↓	↓											

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
					6/25/24	1455
Date: 6/25/24	Time: 1710	Relinquished by:	Received by:	Via: courier	Date 6/27/24	Time 7:30

Remarks: Bill direct to XTO Energy
nAPP2332135027 cost center # 108225 1008
cc: scarttar@vertex.ca
ALudvik@vertex.ca

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Login Sample Receipt Checklist

Client: Vertex Job Number: 885-7006-1

Login Number: 7006 **List Source: Eurofins Albuquerque**
List Number: 1
Creator: McQuiston, Steven

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

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Ms. Sally Carttar
Vertex
3101 Boyd Dr
Carlsbad, New Mexico 88220

Generated 5/10/2024 4:13:31 PM

JOB DESCRIPTION

Vertex - JRU DI 2

JOB NUMBER

885-3693-1

Eurofins Albuquerque
4901 Hawkins NE
Albuquerque NM 87109

See page two for job notes and contact information.

Eurofins Albuquerque

Job Notes

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing South Central, LLC Project Manager.

Authorization

Generated
5/10/2024 4:13:31 PM

Authorized for release by
Andy Freeman, Business Unit Manager
andy.freeman@et.eurofinsus.com
(505)345-3975

Client: Vertex
Project/Site: Vertex - JRU DI 2

Laboratory Job ID: 885-3693-1

Table of Contents

Definitions/Glossary

Client: Vertex Job ID: 885-3693-1
Project/Site: Vertex - JRU DI 2

Qualifiers

GC VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high biased.

GC Semi VOA

Qualifier	Qualifier Description
D	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D.
S1-	Surrogate recovery exceeds control limits, low biased.

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.

Glossary

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

Case Narrative

Client: Vertex
Project: Vertex - JRU DI 2

Job ID: 885-3693-1

Job ID: 885-3693-1 Eurofins Albuquerque

Job Narrative
885-3693-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 5/1/2024 7:35 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 3.9°C.

Gasoline Range Organics
Method 8015D_GRO: Internal standard responses were outside of acceptance limits for the following sample: WES24-07 1ft (885-3693-14). The sample(s) shows evidence of matrix interference.

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

GC VOA
Method 8021B: Internal standard responses were outside of acceptance limits for the following sample: WES24-07 1ft (885-3693-14). The sample(s) shows evidence of matrix interference.

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

Diesel Range Organics
Method 8015D_DRO: The following samples were diluted due to the nature of the sample matrix: BES24-01 1ft (885-3693-1), WES24-01 1ft (885-3693-2), BES24-02 1ft (885-3693-3), WES24-02 1ft (885-3693-4), BES24-03 1ft (885-3693-5) and WES24-03 1ft (885-3693-6). Elevated reporting limits (RLs) are provided.

Method 8015D_DRO: The continuing calibration verification (CCV) associated with batch 885-4408 recovered above the upper control limit for Diesel Range Organics [C10-C28]. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: WES24-08 1ft (885-3693-16), BES24-09 1ft (885-3693-17) and (885-3745-A-1-B).

Method 8015D_DRO: The following sample was diluted due to the nature of the sample matrix: WES24-07 1ft (885-3693-14). Elevated reporting limits (RLs) are provided.

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 - Soluble: The Chloride matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-80164 and analytical batch 880-80169 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

BES24-01 1ft (885-3693-1), WES24-01 1ft (885-3693-2), BES24-02 1ft (885-3693-3), WES24-02 1ft (885-3693-4), BES24-03 1ft (885-3693-5), WES24-03 1ft (885-3693-6), BES24-04 1ft (885-3693-7), WES24-04 1ft (885-3693-8), BES24-05 1ft (885-3693-9), WES24-05 1ft (885-3693-10), (885-3693-B-1-B MS) and (885-3693-B-1-C MSD)

Method 300_ORGFM_28D - Soluble: The Chloride matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-80164 and 880-80164 and analytical batch 880-80169 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Case Narrative

Client: Vertex Job ID: 885-3693-1
Project: Vertex - JRU DI 2

Job ID: 885-3693-1 (Continued) Eurofins Albuquerque

BES24-06 1ft (885-3693-11), WES24-06 1ft (885-3693-12), BES24-07 1ft (885-3693-13), WES24-07 1ft (885-3693-14), BES24-08 1ft (885-3693-15), WES24-08 1ft (885-3693-16), BES24-09 1ft (885-3693-17), WES24-09 1ft (885-3693-18), (885-3693-B-11-B MS) and (885-3693-B-11-C MSD)

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

Client Sample Results

Client: Vertex
Project/Site: Vertex - JRU DI 2

Job ID: 885-3693-1

Client Sample ID: BES24-01 1ft

Date Collected: 04/29/24 10:00
Date Received: 05/01/24 07:35

Lab Sample ID: 885-3693-1

Matrix: Solid

Method: SW846 8015D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	81		4.8		mg/Kg		05/01/24 16:33	05/02/24 21:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*298*	*S1+*	*15 - 244*	*05/01/24 16:33*	*05/02/24 21:15*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		05/01/24 16:33	05/02/24 21:15	1
Ethylbenzene	0.56		0.048		mg/Kg		05/01/24 16:33	05/02/24 21:15	1
Toluene	0.43		0.048		mg/Kg		05/01/24 16:33	05/02/24 21:15	1
Xylenes, Total	4.2		0.097		mg/Kg		05/01/24 16:33	05/02/24 21:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*137*		*39 - 146*	*05/01/24 16:33*	*05/02/24 21:15*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	22000		440		mg/Kg		05/02/24 10:08	05/03/24 12:43	50
Motor Oil Range Organics [C28-C40]	8000		2200		mg/Kg		05/02/24 10:08	05/03/24 12:43	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*0*	*S1- D*	*62 - 134*	*05/02/24 10:08*	*05/03/24 12:43*	*50*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	110	F1	5.0		mg/Kg			05/08/24 12:03	1

Client Sample Results

Client: Vertex
Project/Site: Vertex - JRU DI 2

Job ID: 885-3693-1

Client Sample ID: WES24-01 1ft

Date Collected: 04/29/24 10:15
Date Received: 05/01/24 07:35

Lab Sample ID: 885-3693-2

Matrix: Solid

Method: SW846 8015D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	200		4.6		mg/Kg		05/01/24 16:33	05/02/24 21:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*530*	*S1+*	*15 - 244*	*05/01/24 16:33*	*05/02/24 21:37*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.072		0.023		mg/Kg		05/01/24 16:33	05/02/24 21:37	1
Ethylbenzene	1.9		0.046		mg/Kg		05/01/24 16:33	05/02/24 21:37	1
Toluene	2.1		0.046		mg/Kg		05/01/24 16:33	05/02/24 21:37	1
Xylenes, Total	12		0.093		mg/Kg		05/01/24 16:33	05/02/24 21:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*198*	*S1+*	*39 - 146*	*05/01/24 16:33*	*05/02/24 21:37*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	35000		490		mg/Kg		05/02/24 10:08	05/03/24 13:28	50
Motor Oil Range Organics [C28-C40]	14000		2400		mg/Kg		05/02/24 10:08	05/03/24 13:28	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*0*	*S1- D*	*62 - 134*	*05/02/24 10:08*	*05/03/24 13:28*	*50*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	74		5.0		mg/Kg			05/08/24 12:19	1

Client Sample Results

Client: Vertex
Project/Site: Vertex - JRU DI 2

Job ID: 885-3693-1

Client Sample ID: BES24-02 1ft

Date Collected: 04/29/24 10:30
Date Received: 05/01/24 07:35

Lab Sample ID: 885-3693-3

Matrix: Solid

Method: SW846 8015D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	15		4.9		mg/Kg		05/01/24 16:33	05/02/24 21:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*217*		*15 - 244*	*05/01/24 16:33*	*05/02/24 21:58*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		05/01/24 16:33	05/02/24 21:58	1
Ethylbenzene	0.083		0.049		mg/Kg		05/01/24 16:33	05/02/24 21:58	1
Toluene	0.062		0.049		mg/Kg		05/01/24 16:33	05/02/24 21:58	1
Xylenes, Total	0.54		0.098		mg/Kg		05/01/24 16:33	05/02/24 21:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*39 - 146*	*05/01/24 16:33*	*05/02/24 21:58*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	8500		170		mg/Kg		05/02/24 10:08	05/03/24 13:53	20
Motor Oil Range Organics [C28-C40]	4700		860		mg/Kg		05/02/24 10:08	05/03/24 13:53	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*0*	*S1- D*	*62 - 134*	*05/02/24 10:08*	*05/03/24 13:53*	*20*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	280		5.0		mg/Kg			05/08/24 12:25	1

Client Sample Results

Client: Vertex
Project/Site: Vertex - JRU DI 2

Job ID: 885-3693-1

Client Sample ID: WES24-02 1ft

Date Collected: 04/29/24 10:45
Date Received: 05/01/24 07:35

Lab Sample ID: 885-3693-4

Matrix: Solid

Method: SW846 8015D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	270		4.9		mg/Kg		05/01/24 16:33	05/02/24 22:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*631*	*S1+*	*15 - 244*	*05/01/24 16:33*	*05/02/24 22:20*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.18		0.025		mg/Kg		05/01/24 16:33	05/02/24 22:20	1
Ethylbenzene	2.3		0.049		mg/Kg		05/01/24 16:33	05/02/24 22:20	1
Toluene	2.9		0.049		mg/Kg		05/01/24 16:33	05/02/24 22:20	1
Xylenes, Total	2.6		0.099		mg/Kg		05/01/24 16:33	05/06/24 21:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*216*	*S1+*	*39 - 146*	*05/01/24 16:33*	*05/02/24 22:20*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	27000		460		mg/Kg		05/02/24 10:08	05/03/24 14:18	50
Motor Oil Range Organics [C28-C40]	12000		2300		mg/Kg		05/02/24 10:08	05/03/24 14:18	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*0*	*S1-*	*62 - 134*	*05/02/24 10:08*	*05/03/24 14:18*	*50*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	190		5.0		mg/Kg			05/08/24 12:30	1

Client Sample Results

Client: Vertex
Project/Site: Vertex - JRU DI 2

Job ID: 885-3693-1

Client Sample ID: BES24-03 1ft

Date Collected: 04/29/24 11:00
Date Received: 05/01/24 07:35

Lab Sample ID: 885-3693-5

Matrix: Solid

Method: SW846 8015D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	91		4.9		mg/Kg		05/01/24 16:33	05/02/24 22:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*310*	*S1+*	*15 - 244*	*05/01/24 16:33*	*05/02/24 22:42*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		05/01/24 16:33	05/02/24 22:42	1
Ethylbenzene	0.73		0.049		mg/Kg		05/01/24 16:33	05/02/24 22:42	1
Toluene	0.88		0.049		mg/Kg		05/01/24 16:33	05/02/24 22:42	1
Xylenes, Total	5.9		0.097		mg/Kg		05/01/24 16:33	05/02/24 22:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*140*		*39 - 146*	*05/01/24 16:33*	*05/02/24 22:42*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	5100		90		mg/Kg		05/02/24 10:08	05/03/24 14:42	10
Motor Oil Range Organics [C28-C40]	1600		450		mg/Kg		05/02/24 10:08	05/03/24 14:42	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*0*	*S1- D*	*62 - 134*	*05/02/24 10:08*	*05/03/24 14:42*	*10*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	230		5.0		mg/Kg			05/08/24 12:36	1

Client Sample Results

Client: Vertex
Project/Site: Vertex - JRU DI 2

Job ID: 885-3693-1

Client Sample ID: WES24-03 1ft

Date Collected: 04/29/24 11:15
Date Received: 05/01/24 07:35

Lab Sample ID: 885-3693-6

Matrix: Solid

Method: SW846 8015D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	21		5.0		mg/Kg		05/01/24 16:33	05/02/24 23:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*254*	*S1+*	*15 - 244*	*05/01/24 16:33*	*05/02/24 23:04*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		05/01/24 16:33	05/02/24 23:04	1
Ethylbenzene	0.16		0.050		mg/Kg		05/01/24 16:33	05/02/24 23:04	1
Toluene	0.081		0.050		mg/Kg		05/01/24 16:33	05/02/24 23:04	1
Xylenes, Total	1.2		0.10		mg/Kg		05/01/24 16:33	05/02/24 23:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*121*		*39 - 146*	*05/01/24 16:33*	*05/02/24 23:04*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	2000		89		mg/Kg		05/02/24 10:08	05/03/24 15:07	10
Motor Oil Range Organics [C28-C40]	810		450		mg/Kg		05/02/24 10:08	05/03/24 15:07	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*0*	*S1- D*	*62 - 134*	*05/02/24 10:08*	*05/03/24 15:07*	*10*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	120		5.0		mg/Kg			05/08/24 12:52	1

Client Sample Results

Client: Vertex
Project/Site: Vertex - JRU DI 2

Job ID: 885-3693-1

Client Sample ID: BES24-04 1ft

Date Collected: 04/29/24 11:30
Date Received: 05/01/24 07:35

Lab Sample ID: 885-3693-7

Matrix: Solid

Method: SW846 8015D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.9		mg/Kg		05/02/24 14:55	05/03/24 20:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*15 - 244*	*05/02/24 14:55*	*05/03/24 20:55*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		05/02/24 14:55	05/03/24 20:55	1
Ethylbenzene	ND		0.049		mg/Kg		05/02/24 14:55	05/03/24 20:55	1
Toluene	ND		0.049		mg/Kg		05/02/24 14:55	05/03/24 20:55	1
Xylenes, Total	ND		0.099		mg/Kg		05/02/24 14:55	05/03/24 20:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*39 - 146*	*05/02/24 14:55*	*05/03/24 20:55*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		8.6		mg/Kg		05/03/24 11:28	05/03/24 19:55	1
Motor Oil Range Organics [C28-C40]	ND		43		mg/Kg		05/03/24 11:28	05/03/24 19:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*92*		*62 - 134*	*05/03/24 11:28*	*05/03/24 19:55*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**36**		5.0		mg/Kg			05/08/24 12:58	1

Client Sample Results

Client: Vertex
Project/Site: Vertex - JRU DI 2

Job ID: 885-3693-1

Client Sample ID: WES24-04 1ft

Date Collected: 04/29/24 11:45
Date Received: 05/01/24 07:35

Lab Sample ID: 885-3693-8

Matrix: Solid

Method: SW846 8015D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.7		mg/Kg		05/02/24 14:55	05/03/24 22:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*15 - 244*	*05/02/24 14:55*	*05/03/24 22:06*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		05/02/24 14:55	05/03/24 22:06	1
Ethylbenzene	ND		0.047		mg/Kg		05/02/24 14:55	05/03/24 22:06	1
Toluene	ND		0.047		mg/Kg		05/02/24 14:55	05/03/24 22:06	1
Xylenes, Total	ND		0.094		mg/Kg		05/02/24 14:55	05/03/24 22:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*39 - 146*	*05/02/24 14:55*	*05/03/24 22:06*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		8.7		mg/Kg		05/03/24 11:28	05/03/24 20:18	1
Motor Oil Range Organics [C28-C40]	ND		44		mg/Kg		05/03/24 11:28	05/03/24 20:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*84*		*62 - 134*	*05/03/24 11:28*	*05/03/24 20:18*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**99**		5.0		mg/Kg			05/08/24 13:03	1

Client Sample Results

Client: Vertex
Project/Site: Vertex - JRU DI 2

Job ID: 885-3693-1

Client Sample ID: BES24-05 1ft

Date Collected: 04/29/24 12:00
Date Received: 05/01/24 07:35

Lab Sample ID: 885-3693-9

Matrix: Solid

Method: SW846 8015D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.8		mg/Kg		05/02/24 14:55	05/03/24 23:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*15 - 244*	*05/02/24 14:55*	*05/03/24 23:16*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		05/02/24 14:55	05/03/24 23:16	1
Ethylbenzene	ND		0.048		mg/Kg		05/02/24 14:55	05/03/24 23:16	1
Toluene	ND		0.048		mg/Kg		05/02/24 14:55	05/03/24 23:16	1
Xylenes, Total	ND		0.097		mg/Kg		05/02/24 14:55	05/03/24 23:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*39 - 146*	*05/02/24 14:55*	*05/03/24 23:16*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.3		mg/Kg		05/03/24 11:28	05/03/24 20:42	1
Motor Oil Range Organics [C28-C40]	ND		46		mg/Kg		05/03/24 11:28	05/03/24 20:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*93*		*62 - 134*	*05/03/24 11:28*	*05/03/24 20:42*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**41**		5.0		mg/Kg			05/08/24 13:08	1

Client Sample Results

Client: Vertex
Project/Site: Vertex - JRU DI 2

Job ID: 885-3693-1

Client Sample ID: WES24-05 1ft

Date Collected: 04/29/24 12:15
Date Received: 05/01/24 07:35

Lab Sample ID: 885-3693-10

Matrix: Solid

Method: SW846 8015D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		05/02/24 14:55	05/03/24 23:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*15 - 244*	*05/02/24 14:55*	*05/03/24 23:40*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		05/02/24 14:55	05/03/24 23:40	1
Ethylbenzene	ND		0.050		mg/Kg		05/02/24 14:55	05/03/24 23:40	1
Toluene	ND		0.050		mg/Kg		05/02/24 14:55	05/03/24 23:40	1
Xylenes, Total	ND		0.10		mg/Kg		05/02/24 14:55	05/03/24 23:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*39 - 146*	*05/02/24 14:55*	*05/03/24 23:40*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.6		mg/Kg		05/03/24 11:28	05/03/24 21:06	1
Motor Oil Range Organics [C28-C40]	ND		48		mg/Kg		05/03/24 11:28	05/03/24 21:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*93*		*62 - 134*	*05/03/24 11:28*	*05/03/24 21:06*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**19**		5.0		mg/Kg			05/08/24 13:14	1

Client Sample Results

Client: Vertex
Project/Site: Vertex - JRU DI 2

Job ID: 885-3693-1

Client Sample ID: BES24-06 1ft

Date Collected: 04/29/24 12:30
Date Received: 05/01/24 07:35

Lab Sample ID: 885-3693-11

Matrix: Solid

Method: SW846 8015D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.7		mg/Kg		05/02/24 14:55	05/04/24 00:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*15 - 244*	*05/02/24 14:55*	*05/04/24 00:03*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		05/02/24 14:55	05/04/24 00:03	1
Ethylbenzene	ND		0.047		mg/Kg		05/02/24 14:55	05/04/24 00:03	1
Toluene	ND		0.047		mg/Kg		05/02/24 14:55	05/04/24 00:03	1
Xylenes, Total	ND		0.094		mg/Kg		05/02/24 14:55	05/04/24 00:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*39 - 146*	*05/02/24 14:55*	*05/04/24 00:03*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.0		mg/Kg		05/03/24 11:28	05/03/24 21:29	1
Motor Oil Range Organics [C28-C40]	ND		45		mg/Kg		05/03/24 11:28	05/03/24 21:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*95*		*62 - 134*	*05/03/24 11:28*	*05/03/24 21:29*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**29**	**F1**	5.0		mg/Kg			05/08/24 13:19	1

Client Sample Results

Client: Vertex
Project/Site: Vertex - JRU DI 2

Job ID: 885-3693-1

Client Sample ID: WES24-06 1ft

Date Collected: 04/29/24 12:45
Date Received: 05/01/24 07:35

Lab Sample ID: 885-3693-12

Matrix: Solid

Method: SW846 8015D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.9		mg/Kg		05/02/24 14:55	05/04/24 00:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*15 - 244*	*05/02/24 14:55*	*05/04/24 00:27*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		05/02/24 14:55	05/04/24 00:27	1
Ethylbenzene	ND		0.049		mg/Kg		05/02/24 14:55	05/04/24 00:27	1
Toluene	ND		0.049		mg/Kg		05/02/24 14:55	05/04/24 00:27	1
Xylenes, Total	ND		0.097		mg/Kg		05/02/24 14:55	05/04/24 00:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*39 - 146*	*05/02/24 14:55*	*05/04/24 00:27*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.6		mg/Kg		05/03/24 11:28	05/03/24 21:53	1
Motor Oil Range Organics [C28-C40]	ND		48		mg/Kg		05/03/24 11:28	05/03/24 21:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*90*		*62 - 134*	*05/03/24 11:28*	*05/03/24 21:53*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**90**		5.0		mg/Kg			05/08/24 13:35	1

Client Sample Results

Client: Vertex
Project/Site: Vertex - JRU DI 2

Job ID: 885-3693-1

Client Sample ID: BES24-07 1ft

Date Collected: 04/29/24 13:00
Date Received: 05/01/24 07:35

Lab Sample ID: 885-3693-13

Matrix: Solid

Method: SW846 8015D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.9		mg/Kg		05/02/24 14:55	05/04/24 00:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*15 - 244*	*05/02/24 14:55*	*05/04/24 00:50*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		05/02/24 14:55	05/04/24 00:50	1
Ethylbenzene	ND		0.049		mg/Kg		05/02/24 14:55	05/04/24 00:50	1
Toluene	ND		0.049		mg/Kg		05/02/24 14:55	05/04/24 00:50	1
Xylenes, Total	ND		0.098		mg/Kg		05/02/24 14:55	05/04/24 00:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*39 - 146*	*05/02/24 14:55*	*05/04/24 00:50*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.9		mg/Kg		05/03/24 11:28	05/03/24 22:16	1
Motor Oil Range Organics [C28-C40]	ND		49		mg/Kg		05/03/24 11:28	05/03/24 22:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*92*		*62 - 134*	*05/03/24 11:28*	*05/03/24 22:16*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**60**		5.0		mg/Kg			05/08/24 13:41	1

Client Sample Results

Client: Vertex
Project/Site: Vertex - JRU DI 2

Job ID: 885-3693-1

Client Sample ID: WES24-07 1ft

Date Collected: 04/29/24 13:15
Date Received: 05/01/24 07:35

Lab Sample ID: 885-3693-14

Matrix: Solid

Method: SW846 8015D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	990		47		mg/Kg		05/02/24 14:55	05/08/24 20:41	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*753*	*S1+*	*15 - 244*	*05/02/24 14:55*	*05/08/24 20:41*	*10*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.023		mg/Kg		05/02/24 14:55	05/04/24 01:14	1
Ethylbenzene	6.9		0.47		mg/Kg		05/02/24 14:55	05/08/24 20:41	10
Toluene	4.2		0.047		mg/Kg		05/02/24 14:55	05/04/24 01:14	1
Xylenes, Total	53		0.94		mg/Kg		05/02/24 14:55	05/08/24 20:41	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*410*	*S1+*	*39 - 146*	*05/02/24 14:55*	*05/04/24 01:14*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	8400		98		mg/Kg		05/03/24 11:28	05/06/24 14:45	10
Motor Oil Range Organics [C28-C40]	2500		490		mg/Kg		05/03/24 11:28	05/06/24 14:45	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*0*	*S1- D*	*62 - 134*	*05/03/24 11:28*	*05/06/24 14:45*	*10*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	130		5.0		mg/Kg			05/08/24 13:57	1

Client Sample Results

Client: Vertex
Project/Site: Vertex - JRU DI 2

Job ID: 885-3693-1

Client Sample ID: BES24-08 1ft

Date Collected: 04/29/24 13:30
Date Received: 05/01/24 07:35

Lab Sample ID: 885-3693-15

Matrix: Solid

Method: SW846 8015D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.8		mg/Kg		05/02/24 14:55	05/08/24 21:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*120*		*15 - 244*	*05/02/24 14:55*	*05/08/24 21:05*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		05/02/24 14:55	05/04/24 01:37	1
Ethylbenzene	ND		0.048		mg/Kg		05/02/24 14:55	05/04/24 01:37	1
Toluene	ND		0.048		mg/Kg		05/02/24 14:55	05/04/24 01:37	1
Xylenes, Total	ND		0.096		mg/Kg		05/02/24 14:55	05/04/24 01:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*39 - 146*	*05/02/24 14:55*	*05/04/24 01:37*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.0		mg/Kg		05/03/24 11:28	05/03/24 23:27	1
Motor Oil Range Organics [C28-C40]	ND		45		mg/Kg		05/03/24 11:28	05/03/24 23:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*94*		*62 - 134*	*05/03/24 11:28*	*05/03/24 23:27*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**22**		5.0		mg/Kg			05/08/24 14:03	1

Client Sample Results

Client: Vertex
Project/Site: Vertex - JRU DI 2

Job ID: 885-3693-1

Client Sample ID: WES24-08 1ft

Date Collected: 04/29/24 13:45
Date Received: 05/01/24 07:35

Lab Sample ID: 885-3693-16

Matrix: Solid

Method: SW846 8015D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.7		mg/Kg		05/02/24 14:55	05/04/24 02:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*118*		*15 - 244*	*05/02/24 14:55*	*05/04/24 02:01*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		05/02/24 14:55	05/04/24 02:01	1
Ethylbenzene	ND		0.047		mg/Kg		05/02/24 14:55	05/04/24 02:01	1
Toluene	ND		0.047		mg/Kg		05/02/24 14:55	05/04/24 02:01	1
Xylenes, Total	ND		0.095		mg/Kg		05/02/24 14:55	05/04/24 02:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*39 - 146*	*05/02/24 14:55*	*05/04/24 02:01*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.3		mg/Kg		05/03/24 11:28	05/04/24 00:15	1
Motor Oil Range Organics [C28-C40]	ND		47		mg/Kg		05/03/24 11:28	05/04/24 00:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*96*		*62 - 134*	*05/03/24 11:28*	*05/04/24 00:15*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**43**		5.0		mg/Kg			05/08/24 14:09	1

Client Sample Results

Client: Vertex
Project/Site: Vertex - JRU DI 2

Job ID: 885-3693-1

Client Sample ID: BES24-09 1ft

Date Collected: 04/29/24 14:00
Date Received: 05/01/24 07:35

Lab Sample ID: 885-3693-17

Matrix: Solid

Method: SW846 8015D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.7		mg/Kg		05/02/24 14:55	05/04/24 02:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*15 - 244*	*05/02/24 14:55*	*05/04/24 02:48*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		05/02/24 14:55	05/04/24 02:48	1
Ethylbenzene	ND		0.047		mg/Kg		05/02/24 14:55	05/04/24 02:48	1
Toluene	ND		0.047		mg/Kg		05/02/24 14:55	05/04/24 02:48	1
Xylenes, Total	ND		0.094		mg/Kg		05/02/24 14:55	05/04/24 02:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*39 - 146*	*05/02/24 14:55*	*05/04/24 02:48*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.8		mg/Kg		05/03/24 11:28	05/04/24 00:39	1
Motor Oil Range Organics [C28-C40]	ND		49		mg/Kg		05/03/24 11:28	05/04/24 00:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*96*		*62 - 134*	*05/03/24 11:28*	*05/04/24 00:39*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**30**		5.0		mg/Kg			05/08/24 14:14	1

Client Sample Results

Client: Vertex
Project/Site: Vertex - JRU DI 2

Job ID: 885-3693-1

Client Sample ID: WES24-09 1ft

Date Collected: 04/29/24 14:15
Date Received: 05/01/24 07:35

Lab Sample ID: 885-3693-18

Matrix: Solid

Method: SW846 8015D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	7.5		4.8		mg/Kg		05/02/24 14:55	05/04/24 03:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*165*		*15 - 244*	*05/02/24 14:55*	*05/04/24 03:11*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		05/02/24 14:55	05/04/24 03:11	1
Ethylbenzene	ND		0.048		mg/Kg		05/02/24 14:55	05/04/24 03:11	1
Toluene	ND		0.048		mg/Kg		05/02/24 14:55	05/04/24 03:11	1
Xylenes, Total	ND		0.095		mg/Kg		05/02/24 14:55	05/04/24 03:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*39 - 146*	*05/02/24 14:55*	*05/04/24 03:11*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	430		9.4		mg/Kg		05/03/24 11:28	05/06/24 15:08	1
Motor Oil Range Organics [C28-C40]	150		47		mg/Kg		05/03/24 11:28	05/06/24 15:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*112*		*62 - 134*	*05/03/24 11:28*	*05/06/24 15:08*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	160		5.0		mg/Kg			05/08/24 14:19	1

QC Sample Results

Client: Vertex
Project/Site: Vertex - JRU DI 2

Job ID: 885-3693-1

Method: 8015D - Gasoline Range Organics (GRO) (GC)

Lab Sample ID: MB 885-4219/1-A
Matrix: Solid
Analysis Batch: 4359

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 4219

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		05/01/24 16:33	05/02/24 14:22	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*15 - 244*	*05/01/24 16:33*	*05/02/24 14:22*	*1*

Lab Sample ID: LCS 885-4219/2-A
Matrix: Solid
Analysis Batch: 4359

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 4219

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*217*		*15 - 244*

Lab Sample ID: MB 885-4280/1-A
Matrix: Solid
Analysis Batch: 4416

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 4280

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		05/02/24 14:55	05/03/24 20:32	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*15 - 244*	*05/02/24 14:55*	*05/03/24 20:32*	*1*

Lab Sample ID: LCS 885-4280/2-A
Matrix: Solid
Analysis Batch: 4416

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 4280

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics [C6 - C10]			25.0	26.4		mg/Kg		106	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*210*		*15 - 244*

Lab Sample ID: 885-3693-7 MS
Matrix: Solid
Analysis Batch: 4416

Client Sample ID: BES24-04 1ft
Prep Type: Total/NA
Prep Batch: 4280

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics [C6 - C10]	ND		24.8	28.2		mg/Kg		114	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*217*		*15 - 244*

QC Sample Results

Client: Vertex
Project/Site: Vertex - JRU DI 2

Job ID: 885-3693-1

Method: 8015D - Gasoline Range Organics (GRO) (GC) (Continued)

Lab Sample ID: 885-3693-7 MSD
Matrix: Solid
Analysis Batch: 4416

Client Sample ID: BES24-04 1ft
Prep Type: Total/NA
Prep Batch: 4280

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics [C6 - C10]	ND		24.7	26.7		mg/Kg		108	70 - 130	5	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*213*		*15 - 244*

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 885-4219/1-A
Matrix: Solid
Analysis Batch: 4360

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 4219

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		05/01/24 16:33	05/02/24 14:22	1
Ethylbenzene	ND		0.050		mg/Kg		05/01/24 16:33	05/02/24 14:22	1
Toluene	ND		0.050		mg/Kg		05/01/24 16:33	05/02/24 14:22	1
Xylenes, Total	ND		0.10		mg/Kg		05/01/24 16:33	05/02/24 14:22	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*86*		*39 - 146*	*05/01/24 16:33*	*05/02/24 14:22*	*1*

Lab Sample ID: LCS 885-4219/3-A
Matrix: Solid
Analysis Batch: 4360

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 4219

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*88*		*39 - 146*

Lab Sample ID: MB 885-4280/1-A
Matrix: Solid
Analysis Batch: 4418

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 4280

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		05/02/24 14:55	05/03/24 20:32	1
Ethylbenzene	ND		0.050		mg/Kg		05/02/24 14:55	05/03/24 20:32	1
Toluene	ND		0.050		mg/Kg		05/02/24 14:55	05/03/24 20:32	1
Xylenes, Total	ND		0.10		mg/Kg		05/02/24 14:55	05/03/24 20:32	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*39 - 146*	*05/02/24 14:55*	*05/03/24 20:32*	*1*

Lab Sample ID: LCS 885-4280/3-A
Matrix: Solid
Analysis Batch: 4418

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 4280

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			1.00	0.966		mg/Kg		97	70 - 130		
Ethylbenzene			1.00	0.903		mg/Kg		90	70 - 130		

QC Sample Results

Client: Vertex
Project/Site: Vertex - JRU DI 2

Job ID: 885-3693-1

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

Lab Sample ID: LCS 885-4280/3-A
Matrix: Solid
Analysis Batch: 4418

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 4280

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
m,p-Xylene			2.00	1.82		mg/Kg		91	70 - 130		
o-Xylene			1.00	0.887		mg/Kg		89	70 - 130		
Toluene			1.00	0.902		mg/Kg		90	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*39 - 146*

Lab Sample ID: 885-3693-8 MS
Matrix: Solid
Analysis Batch: 4418

Client Sample ID: WES24-04 1ft
Prep Type: Total/NA
Prep Batch: 4280

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	ND		0.942	0.998		mg/Kg		106	70 - 130		
Ethylbenzene	ND		0.942	0.954		mg/Kg		101	70 - 130		
m,p-Xylene	ND		1.88	1.92		mg/Kg		101	70 - 130		
o-Xylene	ND		0.942	0.942		mg/Kg		100	70 - 130		
Toluene	ND		0.942	0.938		mg/Kg		98	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*39 - 146*

Lab Sample ID: 885-3693-8 MSD
Matrix: Solid
Analysis Batch: 4418

Client Sample ID: WES24-04 1ft
Prep Type: Total/NA
Prep Batch: 4280

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	ND		0.942	1.02		mg/Kg		109	70 - 130	3	20
Ethylbenzene	ND		0.942	0.995		mg/Kg		106	70 - 130	4	20
m,p-Xylene	ND		1.88	2.02		mg/Kg		106	70 - 130	5	20
o-Xylene	ND		0.942	0.994		mg/Kg		106	70 - 130	5	20
Toluene	ND		0.942	0.970		mg/Kg		102	70 - 130	3	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*39 - 146*

Method: 8015D - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 885-4246/1-A
Matrix: Solid
Analysis Batch: 4310

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 4246

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10		mg/Kg		05/02/24 10:08	05/02/24 22:39	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		05/02/24 10:08	05/02/24 22:39	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*78*		*62 - 134*	*05/02/24 10:08*	*05/02/24 22:39*	*1*

QC Sample Results

Client: Vertex
Project/Site: Vertex - JRU DI 2

Job ID: 885-3693-1

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

Lab Sample ID: LCS 885-4246/2-A
Matrix: Solid
Analysis Batch: 4310

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 4246

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics [C10-C28]			50.0	44.1		mg/Kg		88	60 - 135		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Di-n-octyl phthalate (Surr)	*87*		*62 - 134*

Lab Sample ID: MB 885-4338/1-A
Matrix: Solid
Analysis Batch: 4408

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 4338

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10		mg/Kg		05/03/24 11:28	05/03/24 19:07	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		05/03/24 11:28	05/03/24 19:07	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*89*		*62 - 134*	*05/03/24 11:28*	*05/03/24 19:07*	*1*

Lab Sample ID: LCS 885-4338/2-A
Matrix: Solid
Analysis Batch: 4408

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 4338

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics [C10-C28]			50.0	49.0		mg/Kg		98	60 - 135		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Di-n-octyl phthalate (Surr)	*115*		*62 - 134*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-80164/1-A
Matrix: Solid
Analysis Batch: 80169

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		5.0		mg/Kg			05/08/24 11:47	1

Lab Sample ID: LCS 880-80164/2-A
Matrix: Solid
Analysis Batch: 80169

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	259		mg/Kg		104	90 - 110		

QC Sample Results

Client: Vertex
Project/Site: Vertex - JRU DI 2

Job ID: 885-3693-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 880-80164/3-A
Matrix: Solid
Analysis Batch: 80169

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	260		mg/Kg		104	90 - 110	0	20

Lab Sample ID: 885-3693-1 MS
Matrix: Solid
Analysis Batch: 80169

Client Sample ID: BES24-01 1ft
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	110	F1	252	393	F1	mg/Kg		111	90 - 110		

Lab Sample ID: 885-3693-1 MSD
Matrix: Solid
Analysis Batch: 80169

Client Sample ID: BES24-01 1ft
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	110	F1	252	396	F1	mg/Kg		112	90 - 110	1	20

Lab Sample ID: 885-3693-11 MS
Matrix: Solid
Analysis Batch: 80169

Client Sample ID: BES24-06 1ft
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	29	F1	249	311	F1	mg/Kg		113	90 - 110		

Lab Sample ID: 885-3693-11 MSD
Matrix: Solid
Analysis Batch: 80169

Client Sample ID: BES24-06 1ft
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	29	F1	249	311	F1	mg/Kg		113	90 - 110	0	20

QC Association Summary

Client: Vertex
Project/Site: Vertex - JRU DI 2

Job ID: 885-3693-1

GC VOA

Prep Batch: 4219

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3693-1	BES24-01 1ft	Total/NA	Solid	5030C	
885-3693-2	WES24-01 1ft	Total/NA	Solid	5030C	
885-3693-3	BES24-02 1ft	Total/NA	Solid	5030C	
885-3693-4	WES24-02 1ft	Total/NA	Solid	5030C	
885-3693-5	BES24-03 1ft	Total/NA	Solid	5030C	
885-3693-6	WES24-03 1ft	Total/NA	Solid	5030C	
MB 885-4219/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 885-4219/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCS 885-4219/3-A	Lab Control Sample	Total/NA	Solid	5030C	

Prep Batch: 4280

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3693-7	BES24-04 1ft	Total/NA	Solid	5030C	
885-3693-8	WES24-04 1ft	Total/NA	Solid	5030C	
885-3693-9	BES24-05 1ft	Total/NA	Solid	5030C	
885-3693-10	WES24-05 1ft	Total/NA	Solid	5030C	
885-3693-11	BES24-06 1ft	Total/NA	Solid	5030C	
885-3693-12	WES24-06 1ft	Total/NA	Solid	5030C	
885-3693-13	BES24-07 1ft	Total/NA	Solid	5030C	
885-3693-14	WES24-07 1ft	Total/NA	Solid	5030C	
885-3693-15	BES24-08 1ft	Total/NA	Solid	5030C	
885-3693-16	WES24-08 1ft	Total/NA	Solid	5030C	
885-3693-17	BES24-09 1ft	Total/NA	Solid	5030C	
885-3693-18	WES24-09 1ft	Total/NA	Solid	5030C	
MB 885-4280/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 885-4280/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCS 885-4280/3-A	Lab Control Sample	Total/NA	Solid	5030C	
885-3693-7 MS	BES24-04 1ft	Total/NA	Solid	5030C	
885-3693-7 MSD	BES24-04 1ft	Total/NA	Solid	5030C	
885-3693-8 MS	WES24-04 1ft	Total/NA	Solid	5030C	
885-3693-8 MSD	WES24-04 1ft	Total/NA	Solid	5030C	

Analysis Batch: 4359

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3693-1	BES24-01 1ft	Total/NA	Solid	8015D	4219
885-3693-2	WES24-01 1ft	Total/NA	Solid	8015D	4219
885-3693-3	BES24-02 1ft	Total/NA	Solid	8015D	4219
885-3693-4	WES24-02 1ft	Total/NA	Solid	8015D	4219
885-3693-5	BES24-03 1ft	Total/NA	Solid	8015D	4219
885-3693-6	WES24-03 1ft	Total/NA	Solid	8015D	4219
MB 885-4219/1-A	Method Blank	Total/NA	Solid	8015D	4219
LCS 885-4219/2-A	Lab Control Sample	Total/NA	Solid	8015D	4219

Analysis Batch: 4360

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3693-1	BES24-01 1ft	Total/NA	Solid	8021B	4219
885-3693-2	WES24-01 1ft	Total/NA	Solid	8021B	4219
885-3693-3	BES24-02 1ft	Total/NA	Solid	8021B	4219
885-3693-4	WES24-02 1ft	Total/NA	Solid	8021B	4219
885-3693-5	BES24-03 1ft	Total/NA	Solid	8021B	4219
885-3693-6	WES24-03 1ft	Total/NA	Solid	8021B	4219

QC Association Summary

Client: Vertex
Project/Site: Vertex - JRU DI 2

Job ID: 885-3693-1

GC VOA (Continued)

Analysis Batch: 4360 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 885-4219/1-A	Method Blank	Total/NA	Solid	8021B	4219
LCS 885-4219/3-A	Lab Control Sample	Total/NA	Solid	8021B	4219

Analysis Batch: 4416

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3693-7	BES24-04 1ft	Total/NA	Solid	8015D	4280
885-3693-8	WES24-04 1ft	Total/NA	Solid	8015D	4280
885-3693-9	BES24-05 1ft	Total/NA	Solid	8015D	4280
885-3693-10	WES24-05 1ft	Total/NA	Solid	8015D	4280
885-3693-11	BES24-06 1ft	Total/NA	Solid	8015D	4280
885-3693-12	WES24-06 1ft	Total/NA	Solid	8015D	4280
885-3693-13	BES24-07 1ft	Total/NA	Solid	8015D	4280
885-3693-16	WES24-08 1ft	Total/NA	Solid	8015D	4280
885-3693-17	BES24-09 1ft	Total/NA	Solid	8015D	4280
885-3693-18	WES24-09 1ft	Total/NA	Solid	8015D	4280
MB 885-4280/1-A	Method Blank	Total/NA	Solid	8015D	4280
LCS 885-4280/2-A	Lab Control Sample	Total/NA	Solid	8015D	4280
885-3693-7 MS	BES24-04 1ft	Total/NA	Solid	8015D	4280
885-3693-7 MSD	BES24-04 1ft	Total/NA	Solid	8015D	4280

Analysis Batch: 4418

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3693-7	BES24-04 1ft	Total/NA	Solid	8021B	4280
885-3693-8	WES24-04 1ft	Total/NA	Solid	8021B	4280
885-3693-9	BES24-05 1ft	Total/NA	Solid	8021B	4280
885-3693-10	WES24-05 1ft	Total/NA	Solid	8021B	4280
885-3693-11	BES24-06 1ft	Total/NA	Solid	8021B	4280
885-3693-12	WES24-06 1ft	Total/NA	Solid	8021B	4280
885-3693-13	BES24-07 1ft	Total/NA	Solid	8021B	4280
885-3693-14	WES24-07 1ft	Total/NA	Solid	8021B	4280
885-3693-15	BES24-08 1ft	Total/NA	Solid	8021B	4280
885-3693-16	WES24-08 1ft	Total/NA	Solid	8021B	4280
885-3693-17	BES24-09 1ft	Total/NA	Solid	8021B	4280
885-3693-18	WES24-09 1ft	Total/NA	Solid	8021B	4280
MB 885-4280/1-A	Method Blank	Total/NA	Solid	8021B	4280
LCS 885-4280/3-A	Lab Control Sample	Total/NA	Solid	8021B	4280
885-3693-8 MS	WES24-04 1ft	Total/NA	Solid	8021B	4280
885-3693-8 MSD	WES24-04 1ft	Total/NA	Solid	8021B	4280

Analysis Batch: 4492

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3693-4	WES24-02 1ft	Total/NA	Solid	8021B	4219

Analysis Batch: 4672

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3693-14	WES24-07 1ft	Total/NA	Solid	8015D	4280
885-3693-15	BES24-08 1ft	Total/NA	Solid	8015D	4280

Analysis Batch: 4673

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3693-14	WES24-07 1ft	Total/NA	Solid	8021B	4280

QC Association Summary

Client: Vertex
Project/Site: Vertex - JRU DI 2

Job ID: 885-3693-1

GC Semi VOA

Prep Batch: 4246

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3693-1	BES24-01 1ft	Total/NA	Solid	SHAKE	
885-3693-2	WES24-01 1ft	Total/NA	Solid	SHAKE	
885-3693-3	BES24-02 1ft	Total/NA	Solid	SHAKE	
885-3693-4	WES24-02 1ft	Total/NA	Solid	SHAKE	
885-3693-5	BES24-03 1ft	Total/NA	Solid	SHAKE	
885-3693-6	WES24-03 1ft	Total/NA	Solid	SHAKE	
MB 885-4246/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-4246/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	

Analysis Batch: 4310

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 885-4246/1-A	Method Blank	Total/NA	Solid	8015D	4246
LCS 885-4246/2-A	Lab Control Sample	Total/NA	Solid	8015D	4246

Prep Batch: 4338

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3693-7	BES24-04 1ft	Total/NA	Solid	SHAKE	
885-3693-8	WES24-04 1ft	Total/NA	Solid	SHAKE	
885-3693-9	BES24-05 1ft	Total/NA	Solid	SHAKE	
885-3693-10	WES24-05 1ft	Total/NA	Solid	SHAKE	
885-3693-11	BES24-06 1ft	Total/NA	Solid	SHAKE	
885-3693-12	WES24-06 1ft	Total/NA	Solid	SHAKE	
885-3693-13	BES24-07 1ft	Total/NA	Solid	SHAKE	
885-3693-14	WES24-07 1ft	Total/NA	Solid	SHAKE	
885-3693-15	BES24-08 1ft	Total/NA	Solid	SHAKE	
885-3693-16	WES24-08 1ft	Total/NA	Solid	SHAKE	
885-3693-17	BES24-09 1ft	Total/NA	Solid	SHAKE	
885-3693-18	WES24-09 1ft	Total/NA	Solid	SHAKE	
MB 885-4338/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-4338/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	

Analysis Batch: 4383

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3693-1	BES24-01 1ft	Total/NA	Solid	8015D	4246
885-3693-2	WES24-01 1ft	Total/NA	Solid	8015D	4246
885-3693-3	BES24-02 1ft	Total/NA	Solid	8015D	4246
885-3693-4	WES24-02 1ft	Total/NA	Solid	8015D	4246
885-3693-5	BES24-03 1ft	Total/NA	Solid	8015D	4246
885-3693-6	WES24-03 1ft	Total/NA	Solid	8015D	4246

Analysis Batch: 4408

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3693-7	BES24-04 1ft	Total/NA	Solid	8015D	4338
885-3693-8	WES24-04 1ft	Total/NA	Solid	8015D	4338
885-3693-9	BES24-05 1ft	Total/NA	Solid	8015D	4338
885-3693-10	WES24-05 1ft	Total/NA	Solid	8015D	4338
885-3693-11	BES24-06 1ft	Total/NA	Solid	8015D	4338
885-3693-12	WES24-06 1ft	Total/NA	Solid	8015D	4338
885-3693-13	BES24-07 1ft	Total/NA	Solid	8015D	4338
885-3693-15	BES24-08 1ft	Total/NA	Solid	8015D	4338
885-3693-16	WES24-08 1ft	Total/NA	Solid	8015D	4338

QC Association Summary

Client: Vertex
Project/Site: Vertex - JRU DI 2

Job ID: 885-3693-1

GC Semi VOA (Continued)

Analysis Batch: 4408 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3693-17	BES24-09 1ft	Total/NA	Solid	8015D	4338
MB 885-4338/1-A	Method Blank	Total/NA	Solid	8015D	4338
LCS 885-4338/2-A	Lab Control Sample	Total/NA	Solid	8015D	4338

Analysis Batch: 4499

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3693-14	WES24-07 1ft	Total/NA	Solid	8015D	4338
885-3693-18	WES24-09 1ft	Total/NA	Solid	8015D	4338

HPLC/IC

Leach Batch: 80164

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3693-1	BES24-01 1ft	Soluble	Solid	DI Leach	
885-3693-2	WES24-01 1ft	Soluble	Solid	DI Leach	
885-3693-3	BES24-02 1ft	Soluble	Solid	DI Leach	
885-3693-4	WES24-02 1ft	Soluble	Solid	DI Leach	
885-3693-5	BES24-03 1ft	Soluble	Solid	DI Leach	
885-3693-6	WES24-03 1ft	Soluble	Solid	DI Leach	
885-3693-7	BES24-04 1ft	Soluble	Solid	DI Leach	
885-3693-8	WES24-04 1ft	Soluble	Solid	DI Leach	
885-3693-9	BES24-05 1ft	Soluble	Solid	DI Leach	
885-3693-10	WES24-05 1ft	Soluble	Solid	DI Leach	
885-3693-11	BES24-06 1ft	Soluble	Solid	DI Leach	
885-3693-12	WES24-06 1ft	Soluble	Solid	DI Leach	
885-3693-13	BES24-07 1ft	Soluble	Solid	DI Leach	
885-3693-14	WES24-07 1ft	Soluble	Solid	DI Leach	
885-3693-15	BES24-08 1ft	Soluble	Solid	DI Leach	
885-3693-16	WES24-08 1ft	Soluble	Solid	DI Leach	
885-3693-17	BES24-09 1ft	Soluble	Solid	DI Leach	
885-3693-18	WES24-09 1ft	Soluble	Solid	DI Leach	
MB 880-80164/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-80164/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-80164/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
885-3693-1 MS	BES24-01 1ft	Soluble	Solid	DI Leach	
885-3693-1 MSD	BES24-01 1ft	Soluble	Solid	DI Leach	
885-3693-11 MS	BES24-06 1ft	Soluble	Solid	DI Leach	
885-3693-11 MSD	BES24-06 1ft	Soluble	Solid	DI Leach	

Analysis Batch: 80169

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3693-1	BES24-01 1ft	Soluble	Solid	300.0	80164
885-3693-2	WES24-01 1ft	Soluble	Solid	300.0	80164
885-3693-3	BES24-02 1ft	Soluble	Solid	300.0	80164
885-3693-4	WES24-02 1ft	Soluble	Solid	300.0	80164
885-3693-5	BES24-03 1ft	Soluble	Solid	300.0	80164
885-3693-6	WES24-03 1ft	Soluble	Solid	300.0	80164
885-3693-7	BES24-04 1ft	Soluble	Solid	300.0	80164
885-3693-8	WES24-04 1ft	Soluble	Solid	300.0	80164
885-3693-9	BES24-05 1ft	Soluble	Solid	300.0	80164
885-3693-10	WES24-05 1ft	Soluble	Solid	300.0	80164

QC Association Summary

Client: Vertex
Project/Site: Vertex - JRU DI 2

Job ID: 885-3693-1

HPLC/IC (Continued)

Analysis Batch: 80169 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-3693-11	BES24-06 1ft	Soluble	Solid	300.0	80164
885-3693-12	WES24-06 1ft	Soluble	Solid	300.0	80164
885-3693-13	BES24-07 1ft	Soluble	Solid	300.0	80164
885-3693-14	WES24-07 1ft	Soluble	Solid	300.0	80164
885-3693-15	BES24-08 1ft	Soluble	Solid	300.0	80164
885-3693-16	WES24-08 1ft	Soluble	Solid	300.0	80164
885-3693-17	BES24-09 1ft	Soluble	Solid	300.0	80164
885-3693-18	WES24-09 1ft	Soluble	Solid	300.0	80164
MB 880-80164/1-A	Method Blank	Soluble	Solid	300.0	80164
LCS 880-80164/2-A	Lab Control Sample	Soluble	Solid	300.0	80164
LCSD 880-80164/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	80164
885-3693-1 MS	BES24-01 1ft	Soluble	Solid	300.0	80164
885-3693-1 MSD	BES24-01 1ft	Soluble	Solid	300.0	80164
885-3693-11 MS	BES24-06 1ft	Soluble	Solid	300.0	80164
885-3693-11 MSD	BES24-06 1ft	Soluble	Solid	300.0	80164

Lab Chronicle

Client: Vertex
Project/Site: Vertex - JRU DI 2

Job ID: 885-3693-1

Client Sample ID: BES24-01 1ft

Lab Sample ID: 885-3693-1
Matrix: Solid
Date Collected: 04/29/24 10:00
Date Received: 05/01/24 07:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			4219	JP	EET ALB	05/01/24 16:33
Total/NA	Analysis	8015D		1	4359	RA	EET ALB	05/02/24 21:15
Total/NA	Prep	5030C			4219	JP	EET ALB	05/01/24 16:33
Total/NA	Analysis	8021B		1	4360	RA	EET ALB	05/02/24 21:15
Total/NA	Prep	SHAKE			4246	DH	EET ALB	05/02/24 10:08
Total/NA	Analysis	8015D		50	4383	JU	EET ALB	05/03/24 12:43
Soluble	Leach	DI Leach			80164	SA	EET MID	05/07/24 13:15
Soluble	Analysis	300.0		1	80169	SMC	EET MID	05/08/24 12:03

Client Sample ID: WES24-01 1ft

Lab Sample ID: 885-3693-2
Matrix: Solid
Date Collected: 04/29/24 10:15
Date Received: 05/01/24 07:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			4219	JP	EET ALB	05/01/24 16:33
Total/NA	Analysis	8015D		1	4359	RA	EET ALB	05/02/24 21:37
Total/NA	Prep	5030C			4219	JP	EET ALB	05/01/24 16:33
Total/NA	Analysis	8021B		1	4360	RA	EET ALB	05/02/24 21:37
Total/NA	Prep	SHAKE			4246	DH	EET ALB	05/02/24 10:08
Total/NA	Analysis	8015D		50	4383	JU	EET ALB	05/03/24 13:28
Soluble	Leach	DI Leach			80164	SA	EET MID	05/07/24 13:15
Soluble	Analysis	300.0		1	80169	SMC	EET MID	05/08/24 12:19

Client Sample ID: BES24-02 1ft

Lab Sample ID: 885-3693-3
Matrix: Solid
Date Collected: 04/29/24 10:30
Date Received: 05/01/24 07:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			4219	JP	EET ALB	05/01/24 16:33
Total/NA	Analysis	8015D		1	4359	RA	EET ALB	05/02/24 21:58
Total/NA	Prep	5030C			4219	JP	EET ALB	05/01/24 16:33
Total/NA	Analysis	8021B		1	4360	RA	EET ALB	05/02/24 21:58
Total/NA	Prep	SHAKE			4246	DH	EET ALB	05/02/24 10:08
Total/NA	Analysis	8015D		20	4383	JU	EET ALB	05/03/24 13:53
Soluble	Leach	DI Leach			80164	SA	EET MID	05/07/24 13:15
Soluble	Analysis	300.0		1	80169	SMC	EET MID	05/08/24 12:25

Client Sample ID: WES24-02 1ft

Lab Sample ID: 885-3693-4
Matrix: Solid
Date Collected: 04/29/24 10:45
Date Received: 05/01/24 07:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			4219	JP	EET ALB	05/01/24 16:33
Total/NA	Analysis	8015D		1	4359	RA	EET ALB	05/02/24 22:20

Lab Chronicle

Client: Vertex
Project/Site: Vertex - JRU DI 2

Job ID: 885-3693-1

Client Sample ID: WES24-02 1ft
Date Collected: 04/29/24 10:45
Date Received: 05/01/24 07:35

Lab Sample ID: 885-3693-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			4219	JP	EET ALB	05/01/24 16:33
Total/NA	Analysis	8021B		1	4360	RA	EET ALB	05/02/24 22:20
Total/NA	Prep	5030C			4219	JP	EET ALB	05/01/24 16:33
Total/NA	Analysis	8021B		1	4492	JP	EET ALB	05/06/24 21:56
Total/NA	Prep	SHAKE			4246	DH	EET ALB	05/02/24 10:08
Total/NA	Analysis	8015D		50	4383	JU	EET ALB	05/03/24 14:18
Soluble	Leach	DI Leach			80164	SA	EET MID	05/07/24 13:15
Soluble	Analysis	300.0		1	80169	SMC	EET MID	05/08/24 12:30

Client Sample ID: BES24-03 1ft
Date Collected: 04/29/24 11:00
Date Received: 05/01/24 07:35

Lab Sample ID: 885-3693-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			4219	JP	EET ALB	05/01/24 16:33
Total/NA	Analysis	8015D		1	4359	RA	EET ALB	05/02/24 22:42
Total/NA	Prep	5030C			4219	JP	EET ALB	05/01/24 16:33
Total/NA	Analysis	8021B		1	4360	RA	EET ALB	05/02/24 22:42
Total/NA	Prep	SHAKE			4246	DH	EET ALB	05/02/24 10:08
Total/NA	Analysis	8015D		10	4383	JU	EET ALB	05/03/24 14:42
Soluble	Leach	DI Leach			80164	SA	EET MID	05/07/24 13:15
Soluble	Analysis	300.0		1	80169	SMC	EET MID	05/08/24 12:36

Client Sample ID: WES24-03 1ft
Date Collected: 04/29/24 11:15
Date Received: 05/01/24 07:35

Lab Sample ID: 885-3693-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			4219	JP	EET ALB	05/01/24 16:33
Total/NA	Analysis	8015D		1	4359	RA	EET ALB	05/02/24 23:04
Total/NA	Prep	5030C			4219	JP	EET ALB	05/01/24 16:33
Total/NA	Analysis	8021B		1	4360	RA	EET ALB	05/02/24 23:04
Total/NA	Prep	SHAKE			4246	DH	EET ALB	05/02/24 10:08
Total/NA	Analysis	8015D		10	4383	JU	EET ALB	05/03/24 15:07
Soluble	Leach	DI Leach			80164	SA	EET MID	05/07/24 13:15
Soluble	Analysis	300.0		1	80169	SMC	EET MID	05/08/24 12:52

Client Sample ID: BES24-04 1ft
Date Collected: 04/29/24 11:30
Date Received: 05/01/24 07:35

Lab Sample ID: 885-3693-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			4280	JP	EET ALB	05/02/24 14:55
Total/NA	Analysis	8015D		1	4416	JP	EET ALB	05/03/24 20:55

Lab Chronicle

Client: Vertex
Job ID: 885-3693-1
Project/Site: Vertex - JRU DI 2

Client Sample ID: BES24-04 1ft
Lab Sample ID: 885-3693-7
Date Collected: 04/29/24 11:30
Matrix: Solid
Date Received: 05/01/24 07:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			4280	JP	EET ALB	05/02/24 14:55
Total/NA	Analysis	8021B		1	4418	JP	EET ALB	05/03/24 20:55
Total/NA	Prep	SHAKE			4338	DH	EET ALB	05/03/24 11:28
Total/NA	Analysis	8015D		1	4408	JU	EET ALB	05/03/24 19:55
Soluble	Leach	DI Leach			80164	SA	EET MID	05/07/24 13:15
Soluble	Analysis	300.0		1	80169	SMC	EET MID	05/08/24 12:58

Client Sample ID: WES24-04 1ft
Lab Sample ID: 885-3693-8
Date Collected: 04/29/24 11:45
Matrix: Solid
Date Received: 05/01/24 07:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			4280	JP	EET ALB	05/02/24 14:55
Total/NA	Analysis	8015D		1	4416	JP	EET ALB	05/03/24 22:06
Total/NA	Prep	5030C			4280	JP	EET ALB	05/02/24 14:55
Total/NA	Analysis	8021B		1	4418	JP	EET ALB	05/03/24 22:06
Total/NA	Prep	SHAKE			4338	DH	EET ALB	05/03/24 11:28
Total/NA	Analysis	8015D		1	4408	JU	EET ALB	05/03/24 20:18
Soluble	Leach	DI Leach			80164	SA	EET MID	05/07/24 13:15
Soluble	Analysis	300.0		1	80169	SMC	EET MID	05/08/24 13:03

Client Sample ID: BES24-05 1ft
Lab Sample ID: 885-3693-9
Date Collected: 04/29/24 12:00
Matrix: Solid
Date Received: 05/01/24 07:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			4280	JP	EET ALB	05/02/24 14:55
Total/NA	Analysis	8015D		1	4416	JP	EET ALB	05/03/24 23:16
Total/NA	Prep	5030C			4280	JP	EET ALB	05/02/24 14:55
Total/NA	Analysis	8021B		1	4418	JP	EET ALB	05/03/24 23:16
Total/NA	Prep	SHAKE			4338	DH	EET ALB	05/03/24 11:28
Total/NA	Analysis	8015D		1	4408	JU	EET ALB	05/03/24 20:42
Soluble	Leach	DI Leach			80164	SA	EET MID	05/07/24 13:15
Soluble	Analysis	300.0		1	80169	SMC	EET MID	05/08/24 13:08

Client Sample ID: WES24-05 1ft
Lab Sample ID: 885-3693-10
Date Collected: 04/29/24 12:15
Matrix: Solid
Date Received: 05/01/24 07:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			4280	JP	EET ALB	05/02/24 14:55
Total/NA	Analysis	8015D		1	4416	JP	EET ALB	05/03/24 23:40
Total/NA	Prep	5030C			4280	JP	EET ALB	05/02/24 14:55
Total/NA	Analysis	8021B		1	4418	JP	EET ALB	05/03/24 23:40

Lab Chronicle

Client: Vertex
Job ID: 885-3693-1
Project/Site: Vertex - JRU DI 2

Client Sample ID: WES24-05 1ft
Lab Sample ID: 885-3693-10
Date Collected: 04/29/24 12:15
Matrix: Solid
Date Received: 05/01/24 07:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	SHAKE			4338	DH	EET ALB	05/03/24 11:28
Total/NA	Analysis	8015D		1	4408	JU	EET ALB	05/03/24 21:06
Soluble	Leach	DI Leach			80164	SA	EET MID	05/07/24 13:15
Soluble	Analysis	300.0		1	80169	SMC	EET MID	05/08/24 13:14

Client Sample ID: BES24-06 1ft
Lab Sample ID: 885-3693-11
Date Collected: 04/29/24 12:30
Matrix: Solid
Date Received: 05/01/24 07:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			4280	JP	EET ALB	05/02/24 14:55
Total/NA	Analysis	8015D		1	4416	JP	EET ALB	05/04/24 00:03
Total/NA	Prep	5030C			4280	JP	EET ALB	05/02/24 14:55
Total/NA	Analysis	8021B		1	4418	JP	EET ALB	05/04/24 00:03
Total/NA	Prep	SHAKE			4338	DH	EET ALB	05/03/24 11:28
Total/NA	Analysis	8015D		1	4408	JU	EET ALB	05/03/24 21:29
Soluble	Leach	DI Leach			80164	SA	EET MID	05/07/24 13:15
Soluble	Analysis	300.0		1	80169	SMC	EET MID	05/08/24 13:19

Client Sample ID: WES24-06 1ft
Lab Sample ID: 885-3693-12
Date Collected: 04/29/24 12:45
Matrix: Solid
Date Received: 05/01/24 07:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			4280	JP	EET ALB	05/02/24 14:55
Total/NA	Analysis	8015D		1	4416	JP	EET ALB	05/04/24 00:27
Total/NA	Prep	5030C			4280	JP	EET ALB	05/02/24 14:55
Total/NA	Analysis	8021B		1	4418	JP	EET ALB	05/04/24 00:27
Total/NA	Prep	SHAKE			4338	DH	EET ALB	05/03/24 11:28
Total/NA	Analysis	8015D		1	4408	JU	EET ALB	05/03/24 21:53
Soluble	Leach	DI Leach			80164	SA	EET MID	05/07/24 13:15
Soluble	Analysis	300.0		1	80169	SMC	EET MID	05/08/24 13:35

Client Sample ID: BES24-07 1ft
Lab Sample ID: 885-3693-13
Date Collected: 04/29/24 13:00
Matrix: Solid
Date Received: 05/01/24 07:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			4280	JP	EET ALB	05/02/24 14:55
Total/NA	Analysis	8015D		1	4416	JP	EET ALB	05/04/24 00:50
Total/NA	Prep	5030C			4280	JP	EET ALB	05/02/24 14:55
Total/NA	Analysis	8021B		1	4418	JP	EET ALB	05/04/24 00:50
Total/NA	Prep	SHAKE			4338	DH	EET ALB	05/03/24 11:28
Total/NA	Analysis	8015D		1	4408	JU	EET ALB	05/03/24 22:16

Lab Chronicle

Client: Vertex
Job ID: 885-3693-1
Project/Site: Vertex - JRU DI 2

Client Sample ID: BES24-07 1ft
Lab Sample ID: 885-3693-13
Date Collected: 04/29/24 13:00
Matrix: Solid
Date Received: 05/01/24 07:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			80164	SA	EET MID	05/07/24 13:15
Soluble	Analysis	300.0		1	80169	SMC	EET MID	05/08/24 13:41

Client Sample ID: WES24-07 1ft
Lab Sample ID: 885-3693-14
Date Collected: 04/29/24 13:15
Matrix: Solid
Date Received: 05/01/24 07:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			4280	JP	EET ALB	05/02/24 14:55
Total/NA	Analysis	8015D		10	4672	JP	EET ALB	05/08/24 20:41
Total/NA	Prep	5030C			4280	JP	EET ALB	05/02/24 14:55
Total/NA	Analysis	8021B		1	4418	JP	EET ALB	05/04/24 01:14
Total/NA	Prep	5030C			4280	JP	EET ALB	05/02/24 14:55
Total/NA	Analysis	8021B		10	4673	JP	EET ALB	05/08/24 20:41
Total/NA	Prep	SHAKE			4338	DH	EET ALB	05/03/24 11:28
Total/NA	Analysis	8015D		10	4499	JU	EET ALB	05/06/24 14:45
Soluble	Leach	DI Leach			80164	SA	EET MID	05/07/24 13:15
Soluble	Analysis	300.0		1	80169	SMC	EET MID	05/08/24 13:57

Client Sample ID: BES24-08 1ft
Lab Sample ID: 885-3693-15
Date Collected: 04/29/24 13:30
Matrix: Solid
Date Received: 05/01/24 07:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			4280	JP	EET ALB	05/02/24 14:55
Total/NA	Analysis	8015D		1	4672	JP	EET ALB	05/08/24 21:05
Total/NA	Prep	5030C			4280	JP	EET ALB	05/02/24 14:55
Total/NA	Analysis	8021B		1	4418	JP	EET ALB	05/04/24 01:37
Total/NA	Prep	SHAKE			4338	DH	EET ALB	05/03/24 11:28
Total/NA	Analysis	8015D		1	4408	JU	EET ALB	05/03/24 23:27
Soluble	Leach	DI Leach			80164	SA	EET MID	05/07/24 13:15
Soluble	Analysis	300.0		1	80169	SMC	EET MID	05/08/24 14:03

Client Sample ID: WES24-08 1ft
Lab Sample ID: 885-3693-16
Date Collected: 04/29/24 13:45
Matrix: Solid
Date Received: 05/01/24 07:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			4280	JP	EET ALB	05/02/24 14:55
Total/NA	Analysis	8015D		1	4416	JP	EET ALB	05/04/24 02:01
Total/NA	Prep	5030C			4280	JP	EET ALB	05/02/24 14:55
Total/NA	Analysis	8021B		1	4418	JP	EET ALB	05/04/24 02:01
Total/NA	Prep	SHAKE			4338	DH	EET ALB	05/03/24 11:28
Total/NA	Analysis	8015D		1	4408	JU	EET ALB	05/04/24 00:15

Lab Chronicle

Client: Vertex
Job ID: 885-3693-1
Project/Site: Vertex - JRU DI 2

Client Sample ID: WES24-08 1ft
Lab Sample ID: 885-3693-16
Date Collected: 04/29/24 13:45
Matrix: Solid
Date Received: 05/01/24 07:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			80164	SA	EET MID	05/07/24 13:15
Soluble	Analysis	300.0		1	80169	SMC	EET MID	05/08/24 14:09

Client Sample ID: BES24-09 1ft
Lab Sample ID: 885-3693-17
Date Collected: 04/29/24 14:00
Matrix: Solid
Date Received: 05/01/24 07:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			4280	JP	EET ALB	05/02/24 14:55
Total/NA	Analysis	8015D		1	4416	JP	EET ALB	05/04/24 02:48
Total/NA	Prep	5030C			4280	JP	EET ALB	05/02/24 14:55
Total/NA	Analysis	8021B		1	4418	JP	EET ALB	05/04/24 02:48
Total/NA	Prep	SHAKE			4338	DH	EET ALB	05/03/24 11:28
Total/NA	Analysis	8015D		1	4408	JU	EET ALB	05/04/24 00:39
Soluble	Leach	DI Leach			80164	SA	EET MID	05/07/24 13:15
Soluble	Analysis	300.0		1	80169	SMC	EET MID	05/08/24 14:14

Client Sample ID: WES24-09 1ft
Lab Sample ID: 885-3693-18
Date Collected: 04/29/24 14:15
Matrix: Solid
Date Received: 05/01/24 07:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			4280	JP	EET ALB	05/02/24 14:55
Total/NA	Analysis	8015D		1	4416	JP	EET ALB	05/04/24 03:11
Total/NA	Prep	5030C			4280	JP	EET ALB	05/02/24 14:55
Total/NA	Analysis	8021B		1	4418	JP	EET ALB	05/04/24 03:11
Total/NA	Prep	SHAKE			4338	DH	EET ALB	05/03/24 11:28
Total/NA	Analysis	8015D		1	4499	JU	EET ALB	05/06/24 15:08
Soluble	Leach	DI Leach			80164	SA	EET MID	05/07/24 13:15
Soluble	Analysis	300.0		1	80169	SMC	EET MID	05/08/24 14:19

Laboratory References:

EET ALB = Eurofins Albuquerque, 4901 Hawkins NE, Albuquerque, NM 87109, TEL (505)345-3975

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

Accreditation/Certification Summary

Client: Vertex
Job ID: 885-3693-1
Project/Site: Vertex - JRU DI 2

Laboratory: Eurofins Albuquerque

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

Authority	Program	Identification Number	Expiration Date
New Mexico	State	NM9425, NM0901	02-26-25

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

Analysis Method	Prep Method	Matrix	Analyte
8015D	5030C	Solid	Gasoline Range Organics [C6 - C10]
8015D	SHAKE	Solid	Diesel Range Organics [C10-C28]
8015D	SHAKE	Solid	Motor Oil Range Organics [C28-C40]
8021B	5030C	Solid	Benzene
8021B	5030C	Solid	Ethylbenzene
8021B	5030C	Solid	Toluene
8021B	5030C	Solid	Xylenes, Total

Oregon	NELAP	NM100001	02-26-25

Laboratory: Eurofins Midland

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24

Chain-of-Custody Record

Client Vertex (XTO)

Mailing Address On File

Phone # On File

email or Fax# Scarttar@vertex ca

QA/QC Package

☐ Standard ☐ Level 4 (Full Validation)

Accreditation ☐ Az Compliance

☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time

☑ Standard ☑ Rush 5 Day

Project Name JRU DI 2

Project # 06065

Project Manager Sally Carttar

Sampler Wyatt Wadleigh

On Ice: ☑ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 3.8+0.1=3.9

HALL ENVIRONMENTAL ANALYSIS LABOR
www hallenvironmental com
4901 Hawkins NE - Albuquerque, NM 871
Tel 505-345-3975 Fax 505-345-4107

885-3693 COC

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No	BTEX / MTBE / TMB's (8021)	TPH 8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504 1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
04/29/24	10 00	Soil	BES24-01 1ft	1, 4oz jar			X	X					X			
04/29/24	10 15	Soil	WES24-01 1ft	1, 4oz jar			X	X					X			
04/29/24	10 30	Soil	BES24-02 1ft	1, 4oz jar			X	X					X			
04/29/24	10 45	Soil	WES24-02 1ft	1, 4oz jar			X	X					X			
04/29/24	11 00	Soil	BES24-03 1ft	1, 4oz jar			X	X					X			
04/29/24	11 15	Soil	WES24-03 1ft	1, 4oz jar			X	X					X			
04/29/24	11 30	Soil	BES24-04 1ft	1, 4oz jar			X	X					X			
04/29/24	11 45	Soil	WES24-04 1	1, 4oz jar			X	X					X			
04/29/24	12 00	Soil	BES24-05 1ft	1, 4oz jar			X	X					X			
04/29/24	12 15	Soil	WES24-05 1ft	1, 4oz jar			X	X					X			
04/29/24	12.30	Soil	BES24-06 1ft	1, 4oz jar			X	X					X			
04/29/24	12 45	Soil	WES24-06 1ft	1, 4oz jar			X	X					X			

Analysis Request

Date	Time	Relinquished by	Received by	Via	Date	Time
4/30/24	1200	Wyatt Wadleigh				
4/30/24	1900			courier	5/1/24	7:35

Remarks Please CC wwadleigh@vertex ca
Cost center Number 1082251008

If necessary samples submitted to Hall Environmental may be subcontracted to other accredited laboratories This serves as notice of this possibility Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client Vertex (XTO)

Mailing Address On File

Phone # On File

email or Fax# Scarttar@vertex ca

QA/QC Package

☐ Standard ☐ Level 4 (Full Validation)

Accreditation ☐ Az Compliance

☐ NELAC ☐ Other_____

☐ EDD (Type) _____

Turn-Around Time

☑ Standard ☑ Rush 5 Day

Project Name JRU DI 2

Project # 06065

Project Manager Sally Carttar

Sampler Wyatt Wadleigh

On Ice: ☑ Yes ☐ No

# of Coolers 1 Yogi

Cooler Temp(including CF): 3.8+0.1=3.9

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www hallenvironmental com

4901 Hawkins NE - Albuquerque, NM 87109

Tel 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	BTEX / MTBE / TMB's (8021)	TPH 8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504 1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent
04/29/24	13 00	Soil	BES24-07 1ft	1, 4oz jar			X	X					X			
04/29/24	13 15	Soil	WES24-07 1ft	1, 4oz jar			X	X					X			
04/29/24	13 30	Soil	BES24-08 1ft	1, 4oz jar			X	X					X			
04/29/24	13 45	Soil	WES24-08 1ft	1, 4oz jar			X	X					X			
04/29/24	14 00	Soil	BES24-09 1ft	1, 4oz jar			X	X					X			
04/29/24	14 15	Soil	WES24-09 1ft	1, 4oz jar			X	X					X			

Date	Time	Relinquished by	Received by	Via	Date	Time
4/30/24	1200	Wyatt Wadleigh			4/30/24	1200
4/30/24	1900			Courier	5.1.24	7:35

Remarks Please CC wwadleigh@vertex ca

Cost center Number 1082251008

If necessary samples submitted to Hall Environmental may be subcontracted to other accredited laboratories This serves as notice of this possibility Any sub-contracted data will be clearly notated on the analytical report.

Eurofins Albuquerque
4901 Hawkins NE
Albuquerque, NM 87109
Phone 505-345-3975 Fax. 505-345-4107

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Freeman Andy	Carrier Tracking No(s):	COC No: 885-584 1
Client Contact: Shipping/Receiving	Phone:	E-Mail: andy freeman@et.eurofinsus.com	State of Origin: New Mexico	Page: Page 1 of 2
Company: Eurofins Environment Testing South Centr		Accreditations Required (See note): NELAP - Oregon, NELAP - Texas, State - New Mexico		Job #: 885-3693-1
Address: 1211 W Florida Ave	Due Date Requested: 5/7/2024			
City: Midland	TAT Requested (days):			
State, Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: Vertex - JRU DI 2	Project #: 88501279			
Site:	SSOW#:			

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	300_ORGFM_28D/DI_LEACH Chloride	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
BES24-01 1ft (885-3693-1)	4/29/24	10 00 Mountain		Solid			X	1	
WES24-01 1ft (885-3693-2)	4/29/24	10 15 Mountain		Solid			X	1	
BES24-02 1ft (885-3693-3)	4/29/24	10 30 Mountain		Solid			X	1	
WES24-02 1ft (885-3693-4)	4/29/24	10 45 Mountain		Solid			X	1	
BES24-03 1ft (885-3693-5)	4/29/24	11 00 Mountain		Solid			X	1	
WES24-03 1ft (885-3693-6)	4/29/24	11 15 Mountain		Solid			X	1	
BES24-04 1ft (885-3693-7)	4/29/24	11 30 Mountain		Solid			X	1	
WES24-04 1ft (885-3693-8)	4/29/24	11 45 Mountain		Solid			X	1	
BES24-05 1ft (885-3693-9)	4/29/24	12 00 Mountain		Solid			X	1	

Analysis Requested

Preservation Codes: -

Other:

Note: Since laboratory accreditations are subject to change Eurofins Environment Testing South Central LLC places the ownership of method analyte & accreditation compliance upon our 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/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing South Central LLC laboratory or other instructions will be provided Any changes to accreditation status should be brought to Eurofins Environment Testing South Central LLC attention immediately If all requested accreditations are current to date return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing South Central, LLC

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested I, II, III, IV, Other (specify) Primary Deliverable Rank. 2	Special Instructions/QC Requirements

Empty Kit Relinquished by:	Date	Time	Method of Shipment:

Relinquished by:	Date/Time: 5/6/24 1330	Company	Received by:	Date/Time: 5/7/24 1133	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins Albuquerque
4901 Hawkins NE
Albuquerque, NM 87109
Phone 505-345-3975 Fax 505-345-4107

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Freeman, Andy	Carrier Tracking No(s):	COC No: 885-584 2
Client Contact: Shipping/Receiving	Phone:	E-Mail: andy freeman@et.eurofinsus.com	State of Origin: New Mexico	Page: Page 2 of 2
Company: Eurofins Environment Testing South Centr		Accreditations Required (See note): NELAP - Oregon, NELAP - Texas State - New Mexico		Job #: 885-3693-1
Address: 1211 W Florida Ave,	Due Date Requested: 5/7/2024			
City: Midland	TAT Requested (days):			
State, Zip: TX 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: Vertex - JRU DI 2	Project #: 88501279			
Site:	SSOW#:			

Analysis Requested

Preservation Codes: -

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	300_ORGFM_28D/DI_LEACH Chloride	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
WES24-05 1ft (885-3693-10)	4/29/24	12 15 Mountain		Solid			X	1	
BES24-06 1ft (885-3693-11)	4/29/24	12 30 Mountain		Solid			X	1	
WES24-06 1ft (885-3693-12)	4/29/24	12 45 Mountain		Solid			X	1	
BES24-07 1ft (885-3693-13)	4/29/24	13 00 Mountain		Solid			X	1	
WES24-07 1ft (885-3693-14)	4/29/24	13 15 Mountain		Solid			X	1	
BES24-08 1ft (885-3693-15)	4/29/24	13 30 Mountain		Solid			X	1	
WES24-08 1ft (885-3693-16)	4/29/24	13 45 Mountain		Solid			X	1	
BES24-09 1ft (885-3693-17)	4/29/24	14 00 Mountain		Solid			X	1	
WES24-09 1ft (885-3693-18)	4/29/24	14 15 Mountain		Solid			X	1	

Note: Since laboratory accreditations are subject to change Eurofins Environment Testing South Central LLC places the ownership of method analyte & accreditation compliance upon our 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/tests/matrix being analyzed the samples must be shipped back to the Eurofins Environment Testing South Central LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing South Central LLC attention immediately If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing South Central LLC

Possible Hazard Identification: Unconfirmed	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested I II III IV Other (specify) Primary Deliverable Rank 2	Special Instructions/QC Requirements.

Empty Kit Relinquished by:	Date	Time	Method of Shipment:
Relinquished by:	Date/Time: 5/6/24 1330	Company	Received by: Date/Time: 5/7/24 1133 Company
Relinquished by:	Date/Time	Company	Received by: Date/Time Company
Relinquished by:	Date/Time:	Company	Received by: Date/Time Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: Vertex Job Number: 885-3693-1

Login Number: 3693 **List Source: Eurofins Albuquerque**
List Number: 1
Creator: Lowman, Nick

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 <6mm (1/4").	True	

Login Sample Receipt Checklist

Client: Vertex Job Number: 885-3693-1

Login Number: 3693 **List Source: Eurofins Midland**
List Number: 2 **List Creation: 05/07/24 11:30 AM**
Creator: Vasquez, Julisa

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

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

QUESTIONS

Action 442269

QUESTIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 442269
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAPP2332135027**
Incident Name	**NAPP2332135027 JAMES RANCH UNIT DI 2 CTB @ 0**
Incident Type	**Oil Release**
Incident Status	**Deferral Request Received**
Incident Facility	**[fAPP2126355247] JRU DI2 BATTERY**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	JAMES RANCH UNIT DI 2 CTB
Date Release Discovered	11/13/2023
Surface Owner	Federal

Incident Details	
Please answer all the questions in this group.	
Incident Type	Oil Release
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.	
Crude Oil Released (bbls) Details	Cause: Equipment Failure | Other (Specify) | Crude Oil | Released: 11 BBL | Recovered: 8 BBL | Lost: 3 BBL.
Produced Water Released (bbls) Details	*Not answered.*
Is the concentration of chloride in the produced water >10,000 mg/l	*Not answered.*
Condensate Released (bbls) Details	*Not answered.*
Natural Gas Vented (Mcf) Details	*Not answered.*
Natural Gas Flared (Mcf) Details	*Not answered.*
Other Released Details	*Not answered.*
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	A nipple and gauge failed on the LACT causing a release of 10.67 barrels of oil to containment and pad.

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 442269
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	**No, according to supplied volumes this does not appear to be a "gas only" report.**
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	**No**
Reasons why this would be considered a submission for a notification of a major release	*Unavailable.*

With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.

Initial Response	
The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury.	
The source of the release has been stopped	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	*Not answered.*

Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.

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

I hereby agree and sign off to the above statement	Name: Colton Brown Title: Environmental Advisor Email: colton.s.brown@exxonmobil.com Date: 03/13/2025

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 442269
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

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 26 and 50 (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 ½ and 1 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between 1 and 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Between 1 and 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between ½ and 1 (mi.)
Any other fresh water well or spring	Between ½ and 1 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between 1 and 5 (mi.)
A subsurface mine	Between 1 and 5 (mi.)
An (non-karst) unstable area	Between 1 and 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Low
A 100-year floodplain	Between 1 and 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	No

Remediation Plan	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
Requesting a remediation plan approval with this submission	Yes
Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)	
Chloride (EPA 300.0 or SM4500 Cl B)	293
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	15368
GRO+DRO (EPA SW-846 Method 8015M)	11068
BTEX (EPA SW-846 Method 8021B or 8260B)	0
Benzene (EPA SW-846 Method 8021B or 8260B)	0
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
On what estimated date will the remediation commence	04/10/2024
On what date will (or did) the final sampling or liner inspection occur	04/29/2024
On what date will (or was) the remediation complete(d)	04/29/2024
What is the estimated surface area (in square feet) that will be reclaimed	3183
What is the estimated volume (in cubic yards) that will be reclaimed	272
What is the estimated surface area (in square feet) that will be remediated	3183
What is the estimated volume (in cubic yards) that will be remediated	272
These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.	
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 442269
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

QUESTIONS

Remediation Plan (continued)	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:	
(Select all answers below that apply.)	
(Ex Situ) Excavation and **off-site** disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for **off-site** disposal	HALFWAY DISPOSAL AND LANDFILL [fEEM0112334510]
OR which OCD approved well (API) will be used for **off-site** disposal	*Not answered.*
OR is the **off-site** disposal site, to be used, out-of-state	*Not answered.*
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.*
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
I hereby agree and sign off to the above statement	Name: Colton Brown Title: Environmental Advisor Email: colton.s.brown@exxonmobil.com Date: 03/13/2025
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.	

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 442269
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

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	Yes
Have the lateral and vertical extents of contamination been fully delineated	**Yes**
Is the remaining contamination in areas immediately under or around production equipment where remediation could cause a major facility deconstruction	Yes
Please list or describe the production equipment and how (re)moving the equipment would cause major facility deconstruction	LACT Unit would need to be removed to complete excavation.
What is the remaining surface area (in square feet) that will still need to be remediated if a deferral is granted	2082
What is the remaining volume (in cubic yards) that will still need to be remediated if a deferral is granted	231
Per Paragraph (2) of Subsection C of 19.15.29.12 NMAC if contamination is located in areas immediately under or around production equipment such as production tanks, wellheads and pipelines where remediation could cause a major facility deconstruction, the remediation, restoration and reclamation may be deferred with division written approval until the equipment is removed during other operations, or when the well or facility is plugged or abandoned, whichever comes first.	
Enter the facility ID (f#) on which this deferral should be granted	JRU DI2 BATTERY [fAPP2126355247]
Enter the well API (30-) on which this deferral should be granted	*Not answered.*
Contamination does not cause an imminent risk to human health, the environment, or groundwater	True
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
I hereby agree and sign off to the above statement	Name: Colton Brown Title: Environmental Advisor Email: colton.s.brown@exxonmobil.com Date: 03/13/2025

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 442269
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	**337770**
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	**05/03/2024**
What was the (estimated) number of samples that were to be gathered	**10**
What was the sampling surface area in square feet	**2000**

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	No

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 442269
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	XTO's deferral requests final remediation for (Incident Number NAPP2332135027) until final reclamation of the well pad or major construction, whichever comes first. Vertex and XTO do not believe deferment will result in imminent risk to human health, the environment, or groundwater. The impacted soil is the shaded area on figure 2 that is next to infrastructure and equipment, where remediation would require a major facility deconstruction. At this time, OCD approves this request. The Deferral Request and C-141 will be accepted for record and placed in the incident file. The release will remain open in OCD database files and reflect an open environmental issue.	3/25/2025