ENSOLUM

January 21, 2025

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

Re: Deferral Request
JRU DI 1A Battery
Incident Number nAPP2411739118
Eddy County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum) on behalf of XTO Energy, Inc. (XTO), has prepared this *Deferral Request* to document assessment, delineation, excavation, and soil sampling activities at the JRU DI 1A Battery (Site). The purpose of the Site assessment and soil sampling activities was to assess for the presence or absence of impacts to soil following a release of produced water. Based on field observations and soil sample laboratory analytical results, XTO is submitting this *Deferral Request*, describing Site assessment, delineation, and excavation activities that have occurred and requesting deferral of final remediation for Incident Number nAPP2411739118 until the Site is reconstructed, and/or the well pad is abandoned.

RELEASE SUMMARY AND SITE BACKGROUND

The Site is located in Unit F, Section 21, Township 22 South, Range 30 East, in Eddy County, New Mexico (32.379905°, -103.886691°) and is associated with oil and gas exploration and production operations on federal land managed by the Bureau of Land Management (BLM).

On April 9, 2024, internal corrosion on a produced water pipeline resulted in the release of approximately 14.53 barrels (bbls) of produced water onto the surface of the well pad and around active production equipment and process piping. No fluids were recovered. XTO submitted an Initial C-141 Application (C-141) to the New Mexico Oil Conservation Division (NMOCD) on April 26, 2024. The release was assigned Incident Number nAPP2411739118.

Vertex Resource Group (Vertex) conducted Site assessment and delineation activities and presented the results in a *Remediation Work Plan* (*Work Plan)*. The *Work Plan* was submitted to the NMOCD on September 24, 2024, and was approved by the NMOCD on October 23, 2024. The *Work Plan* proposed to conduct excavation utilizing hand tools in all areas except the northeastern corner of the release, near borehole BH24-09. Delineation soil samples BH24-01 through BH24-04, BH24-06 through BH24-10, and BH24-16 were advanced within the release extent area. Based on laboratory analytical results for the delineation soil samples, an estimated 95 cubic yards of impacted soil was anticipated to be removed in several areas totaling approximately 400 square-feet to a total depth of 1-foot bgs in all areas except for the northeast corner, which indicated soil impacts existed beyond 2 feet bgs. Delineation soil samples BH24-05, and BH24-11 through BH24-14 were collected around the release extent and laboratory analytical results for all lateral soil samples indicated all constituents of concern (COC) concentrations were below the proposed Closure Criteria, and thus fully defined the edge of the release. Analytical

results for all soil samples collected within the release extent indicated impacted soil exists at depths ranging from ground surface to 8 feet bgs. Delineation soil sample locations are depicted on Figure 2 in the approved *Work Plan* report provided in Appendix A.

Following delineation activities, excavation activities were conducted to remove impacted soil. Due to the release area being surrounded by active production equipment and pipelines, the majority of the release area is inaccessible which resulted in multiple excavation extents to remove as much impacted soil as possible. Inaccessible areas include borehole locations BH24-02 through BH24-04, and BH24-10.

The final excavation extents measured approximately 385 square feet in total. A total of approximately 20 cubic yards of impacted soil was removed during the excavation activities. The impacted soil was transported and properly disposed of at the R360 Halfway Disposal and Landfill in Hobbs, New Mexico. Impacted soil disposal manifests are provided in Appendix F.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

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

Depth to groundwater at the Site is greater than 100 feet below ground surface (bgs) based on the nearest groundwater well data. In March 2013, a New Mexico Office of the State Engineer (NMOSE) permitted well (C-1916) was advanced to a depth of 188 feet bgs located approximately 0.2 miles southeast of the Site and is depicted on Figure 1. Depth to groundwater is documented to be 110 feet bgs. The well was plugged in 2013 and the Plugging Record is included in Appendix B.

The closest continuously flowing or significant watercourse to the Site is a dry wash located approximately 581 feet southwest of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is underlain by unstable geology (high potential karst designation area).

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

- Benzene: 10 milligrams per kilogram (mg/kg)
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg
- Total petroleum hydrocarbons (TPH): 100 mg/kg
- Chloride: 600 mg/kg

ADDITIONAL DELINEATION AND CONFIRMATION SOIL SAMPLING ACTIVITIES

On December 2, 2024, Ensolum arrived onsite to conduct additional delineation confirmation soil sampling activities. Following removal of impacted soil, Ensolum personnel collected 5-point composite soil samples representing no more than 200 square feet from the sidewalls and floor of the excavation. The 5-point composite soil samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Ten confirmation

floor soil samples (FS01 through FS10) and ten confirmation sidewall soil samples (SW01 through SW10) were collected from the floors and sidewalls of each excavation extent. Floor soil sample FS01 was collected at a depth of 4 feet bgs, all other floor soil samples were collected at 1-foot bgs. Sidewall soil sample SW01 was collected at depths ranging from ground surface to 4 feet bgs, and all other sidewall soil samples were collected from ground surface to 1-foot bgs.

In an effort to define vertical impacts to soil discovered from the June 2024 delineation soil sampling event, Ensolum advanced two boreholes (BH01 and BH02) within the release area. Borehole BH01 was advanced to a terminal depth of 9 feet bgs and BH02 was advanced to a terminal depth of 4 feet bgs. Soil was field screened within each borehole at every foot until field screening results indicated soil concentrations were below Closure Criteria. Ensolum personnel screened soil for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chlorides utilizing Hach® chloride QuanTab® test strips. Field screening results and observations were logged on lithologic/soil sampling logs, which are included in Appendix C. Discrete delineation soil samples were collected in each borehole at the highest field screening and the terminal depth of the borehole. The soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation of the Site activities is presented on a Photographic Log in Appendix D.

All soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported under strict chain-of-custody procedures to Cardinal Laboratories (Cardinal) in Hobbs, New Mexico, for analysis of the following COCs: BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH- gasoline range organics (GRO), TPH-diesel range organics (DRO), and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following Standard Method SM4500.

LABORATORY ANALYTICAL RESULTS

Laboratory analytical results indicated chloride concentrations exceeded Closure Criteria for delineation soil samples BH24-06 at 2 feet bgs, BH24-07 at 2 feet bgs, BH24-08 at 2 feet bgs, and all samples collected in boreholes BH24-02, BH24-03, BH24-04, BH24-10. Delineation soil samples indicating chloride concentrations exceeded Closure Criteria but were removed by excavation activities include BH24-01, BH24-06, BH24-07, BH24-08, and BH24-16 all collected at ground surface, BH24-09 collected at ground surface and 2 feet bgs, and BH01 and BH02 collected at 1-foot bgs. All other delineation soil samples collected indicated all COC concentrations were below Closure Criteria.

Laboratory analytical results indicated chloride concentrations exceeded Closure Criteria for confirmation soil samples FS02 through FS05, and SW02 through SW05. All other confirmation soil samples collected indicated all COC concentrations were below Closure Criteria. Laboratory analytical results are summarized on Table 1, and the complete laboratory analytical reports are included in Appendix E.

DEFFERAL REQUEST

XTO is requesting deferral of final remediation due to the presence of active production equipment and process piping preventing full excavation of impacted soil. The estimated area of remaining impacted soil measures approximately 1,760 square feet and a total of approximately 320 cubic yards of chloride impacted soil remains in place, assuming depths of 4 feet bgs near sample locations BH24-07/FS05, and 9 feet bgs in the remaining proposed deferral area. The impacted soil is limited to the area beneath active production equipment and surface piping, where remediation would require a major facility deconstruction. The deferral area has been vertically delineated by delineation soil samples BH01A at

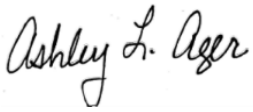
9 feet bgs, BH02A at 4 feet bgs, and BH24-07 at 4 feet bgs. The deferral area has been laterally delineated by delineation soil samples BH24-05, and BH24-11 through BH24-14 and confirmation sidewall soil samples SW01, and SW06 through SW10. The deferral area and all delineation and excavation soil samples used to define the deferral area are depicted on Figure 4.

XTO does not believe deferment will result in imminent risk to human health, the environment, or groundwater. Depth to groundwater was determined to be greater than 100 feet, and the entirety of the release remained on pad. Based on the presence of active production equipment and process piping within the release area and the complete lateral and vertical definition of impacted soil remaining in place, XTO requests deferral of final remediation for Incident Number nAPP2411739118 until final reclamation of the well pad or major construction, whichever comes first.

If you have any questions or comments, please contact Ms. Tacoma Morrissey at (337) 257-8307 or tmorrissey@ensolum.com.

Sincerely,
Ensolum, LLC

Tacoma Morrissey
Associate Principal, Geologist



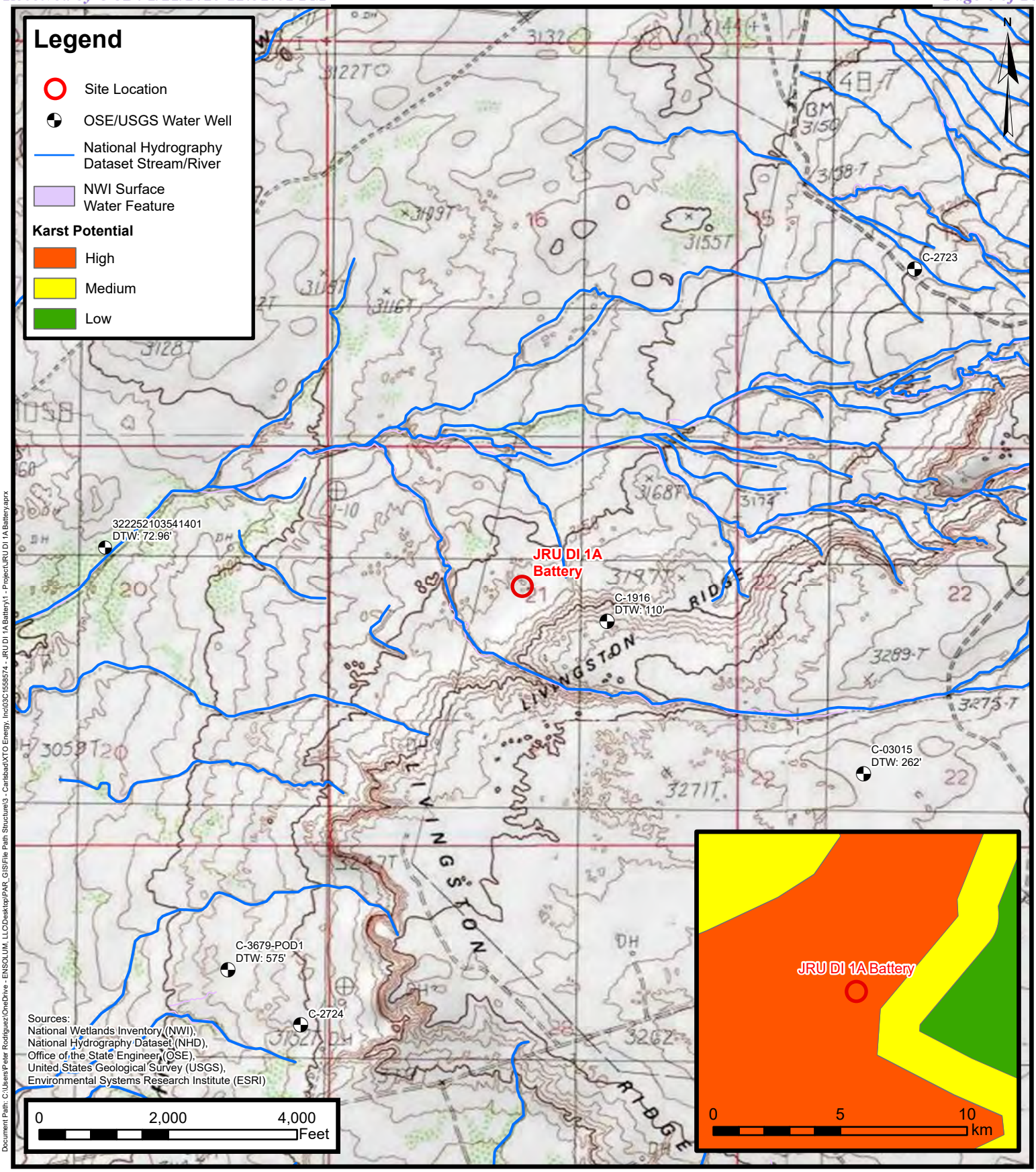
Ashley L. Ager, M.S., P.G.
Program Director

Appendices:

Figure 1	Site Receptor Map
Figure 2	Delineation Soil Sample Locations
Figure 3	Excavation Soil Sample Locations
Figure 4	Deferral Area Map
Table 1	Soil Sample Analytical Results
Appendix A	August 3, 2024 *Remediation Work Plan*
Appendix B	Referenced Well Records
Appendix C	Lithologic / Soil Sampling Logs
Appendix D	Photographic Log
Appendix E	Laboratory Analytical Reports & Chain-of-Custody Documentation
Appendix F	Disposal Facility Manifests

ENSOLUM

FIGURES



Document Path: C:\Users\Peter Rodriguez\OneDrive - ENSOLUM, LLC\Desktop\PAR_GIS\File Path Structure\3 - Carlsbad\XTO Energy, Inc\03C1558574 - JRU DI 1A Battery\1 - Project\JRU DI 1A Battery.aprx

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

XTO Energy, Inc

JRU DI 1A Battery

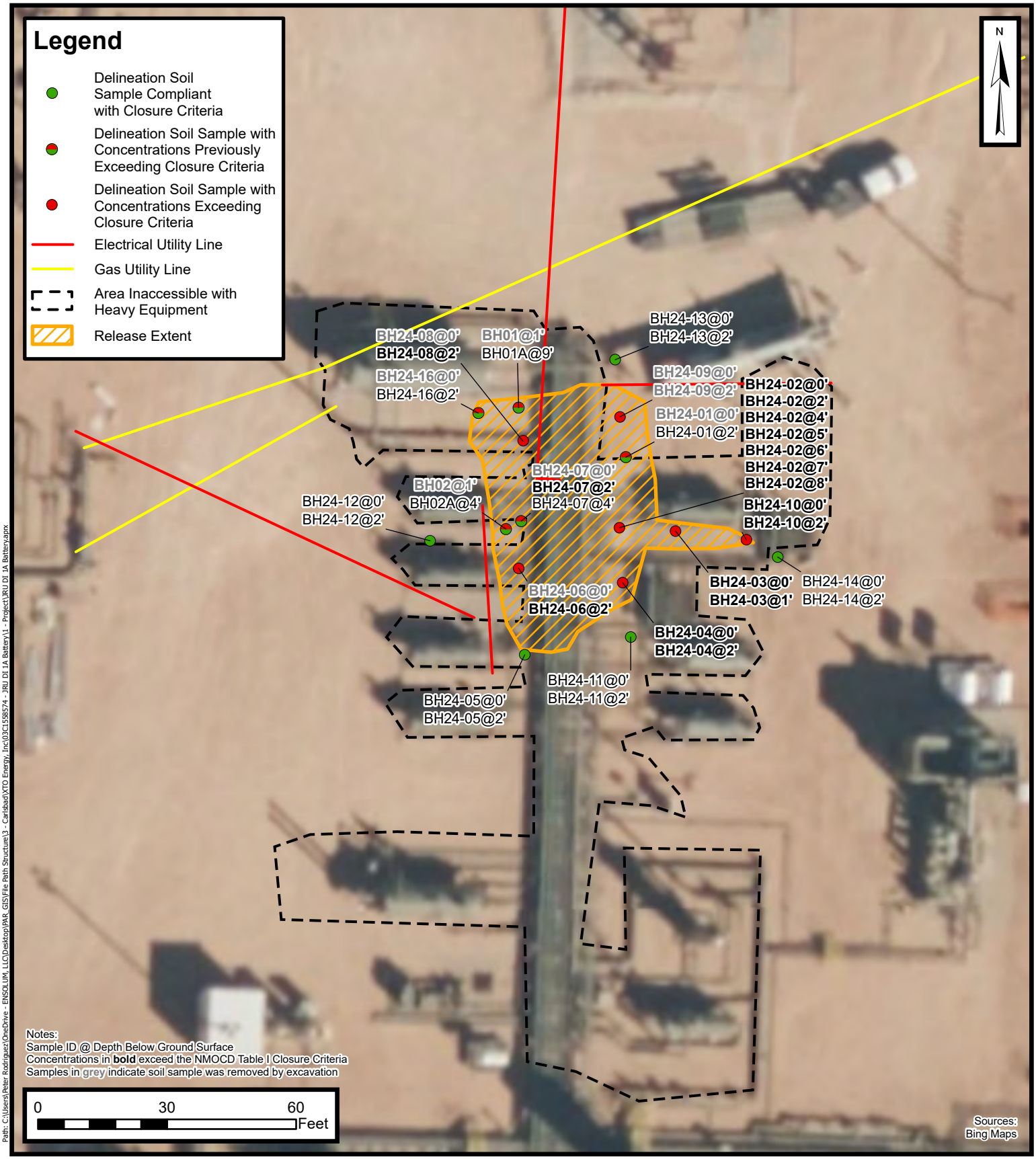
Incident Number: NAPP2411739118

Unit F, Sec 21, T22S, R30E

Eddy County, New Mexico

FIGURE

1

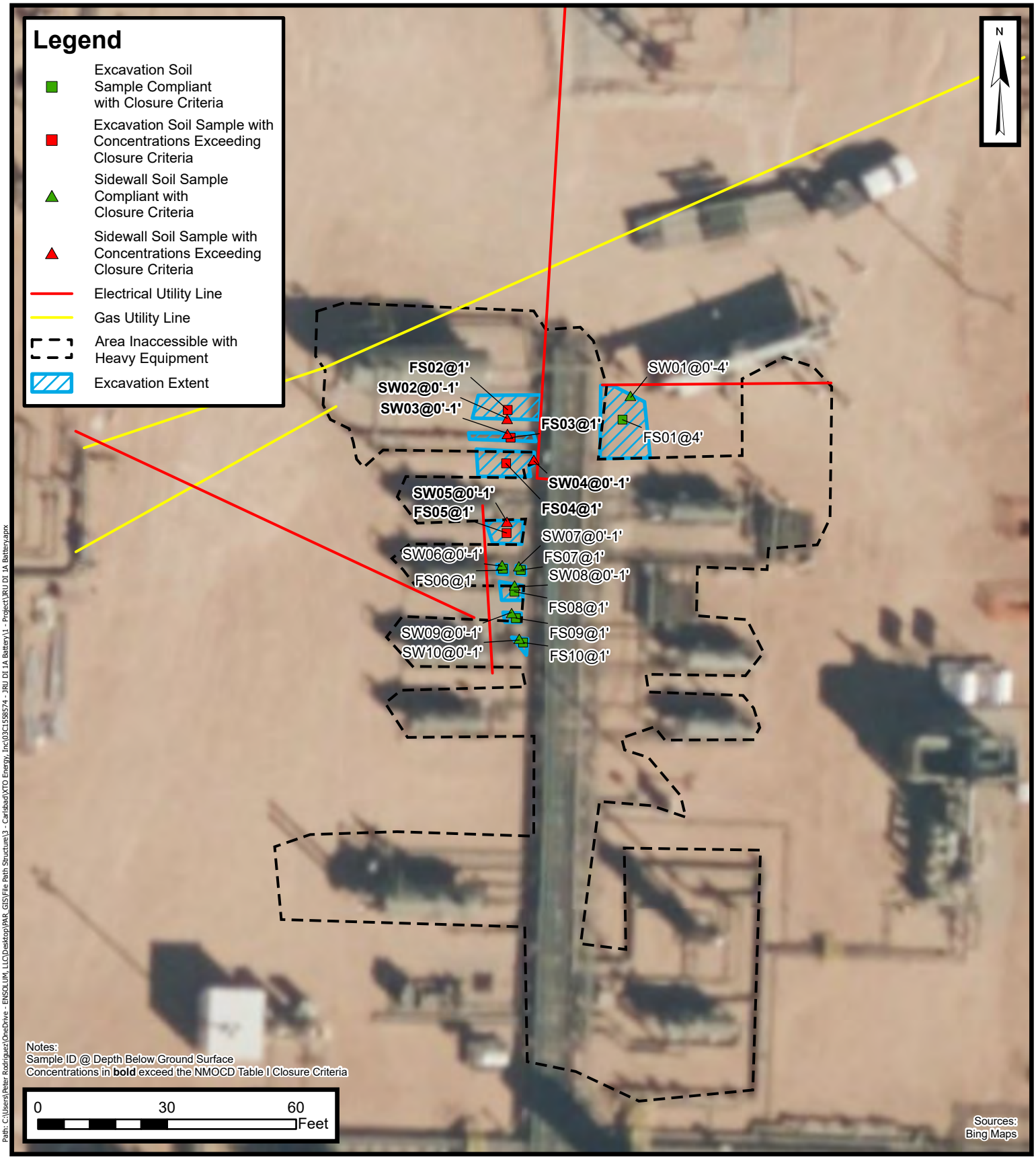


ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Delineation Soil Sample Locations

XTO Energy, Inc
JRU DI 1A Battery
Incident Number: NAPP2411739118
Unit F, Sec 21, T22S, R30E
Eddy County, New Mexico

FIGURE
2

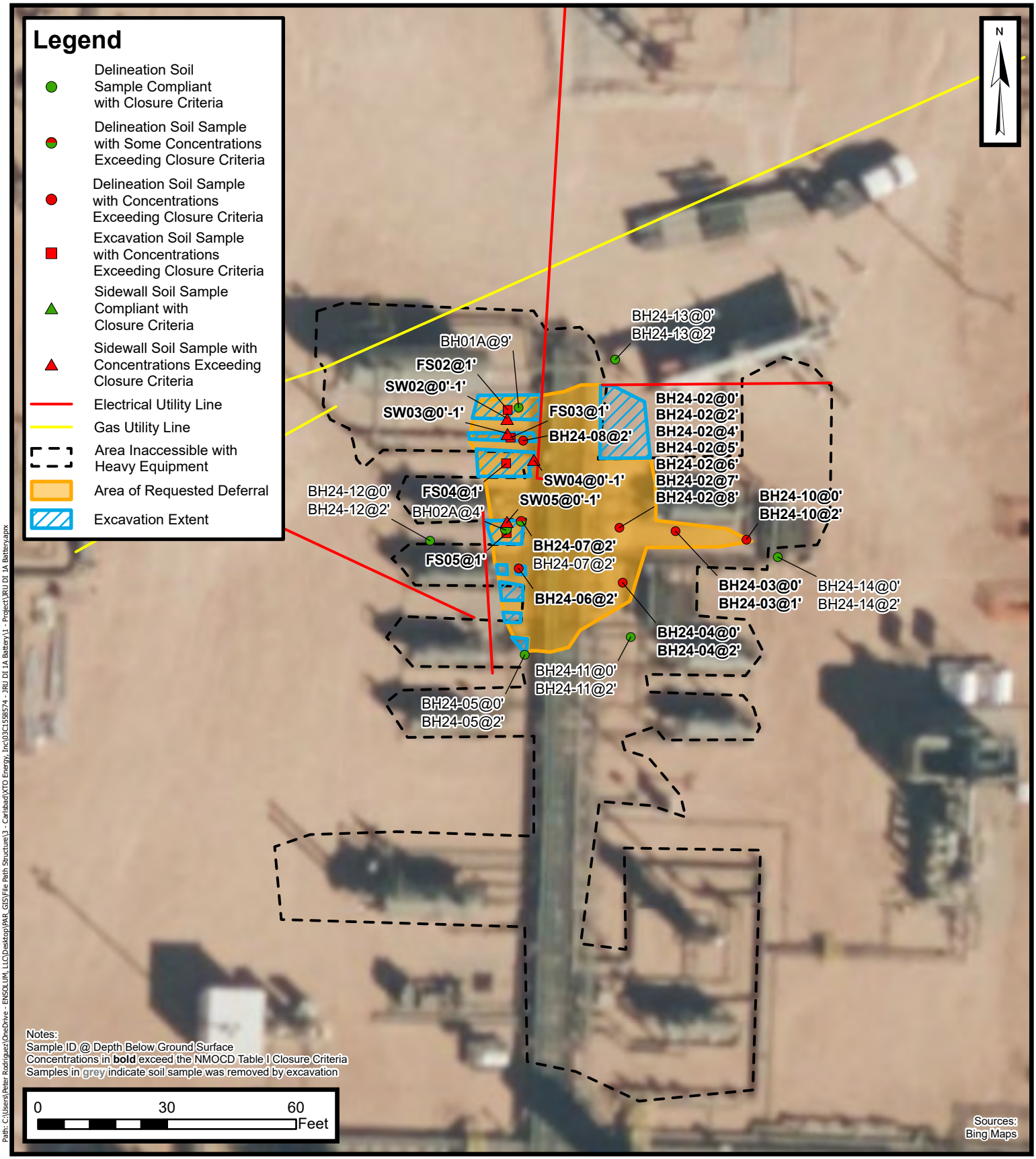


ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Excavation Soil Sample Locations

XTO Energy, Inc
JRU DI 1A Battery
Incident Number: NAPP2411739118
Unit F, Sec 21, T22S, R30E
Eddy County, New Mexico

FIGURE
3



Path: C:\Users\Peter Rodriguez\OneDrive - ENSOLUM, LLC\Desktop\PAR_GIS\File Path Structure\3 - Carlsbad\XTO Energy, Inc\03C1598574 - JRU DI 1A Battery\1 - Project\JRU DI 1A Battery.aprx

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Area of Requested Deferral

XTO Energy, Inc
JRU DI 1A Battery
Incident Number: NAPP2411739118
Unit F, Sec 21, T22S, R30E
Eddy County, New Mexico

FIGURE
4

ENSOLUM

TABLES

ENSOLUM

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
JRU DI 1A Battery
XTO Energy, Inc
Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
Delineation Soil Samples										
~~BH24-01~~	~~06/27/2024~~	~~0~~	~~ND~~	~~ND~~	~~ND~~	~~ND~~	~~ND~~	~~ND~~	~~ND~~	~~1,600~~
BH24-01	06/27/2024	2	ND	ND	ND	ND	ND	ND	ND	320
BH24-02	06/27/2024	0	ND	ND	ND	ND	ND	ND	ND	**12,000**
BH24-02	06/27/2024	2	ND	ND	ND	ND	ND	ND	ND	**5,400**
BH24-02	06/29/2024	4	ND	ND	ND	36	53	36	89	**6,100**
BH24-02	06/29/2024	5	ND	ND	ND	ND	ND	ND	ND	**2,900**
BH24-02	06/29/2024	6	ND	ND	ND	ND	ND	ND	ND	**2,300**
BH24-02	06/29/2024	7	ND	ND	ND	ND	ND	ND	ND	**1,300**
BH24-02	06/29/2024	8	ND	ND	ND	ND	ND	ND	ND	**1,700**
BH24-03	06/27/2024	0	ND	ND	ND	ND	ND	ND	ND	**12,000**
BH24-03	06/27/2024	2	ND	ND	ND	ND	ND	ND	ND	**2,600**
BH24-04	06/27/2024	0	ND	ND	ND	ND	ND	ND	ND	**9,100**
BH24-04	06/27/2024	2	ND	ND	ND	ND	ND	ND	ND	**5,200**
BH24-05	06/27/2024	0	ND	ND	ND	ND	ND	ND	ND	390
BH24-05	06/27/2024	2	ND	ND	ND	ND	ND	ND	ND	250
~~BH24-06~~	~~06/27/2024~~	~~0~~	~~ND~~	~~ND~~	~~ND~~	~~ND~~	~~ND~~	~~ND~~	~~ND~~	~~9,100~~
BH24-06	06/27/2024	2	ND	ND	ND	ND	ND	ND	ND	**670**
~~BH24-07~~	~~06/27/2024~~	~~0~~	~~ND~~	~~ND~~	~~ND~~	~~ND~~	~~ND~~	~~ND~~	~~ND~~	~~3,200~~
BH24-07	06/27/2024	2	ND	ND	ND	ND	ND	ND	ND	**960**
BH24-07	06/29/2024	4	ND	ND	ND	ND	ND	ND	ND	110
~~BH24-08~~	~~06/27/2024~~	~~0~~	~~ND~~	~~ND~~	~~ND~~	~~ND~~	~~ND~~	~~ND~~	~~ND~~	~~1,200~~
BH24-08	06/27/2024	2	ND	ND	ND	ND	ND	ND	ND	**2,500**
~~BH24-09~~	~~06/28/2024~~	~~0~~	~~ND~~	~~ND~~	~~ND~~	~~ND~~	~~ND~~	~~ND~~	~~ND~~	~~8,800~~
~~BH24-09~~	~~06/28/2024~~	~~2~~	~~ND~~	~~ND~~	~~ND~~	~~ND~~	~~ND~~	~~ND~~	~~ND~~	~~3,300~~
BH24-10	06/28/2024	0	ND	ND	ND	ND	ND	ND	ND	**7,200**
BH24-10	06/28/2024	2	ND	ND	ND	ND	ND	ND	ND	**4,000**
BH24-11	06/28/2024	0	ND	ND	ND	ND	ND	ND	ND	340
BH24-11	06/28/2024	2	ND	ND	ND	ND	ND	ND	ND	150
BH24-12	06/28/2024	0	ND	ND	ND	ND	ND	ND	ND	150
BH24-12	06/28/2024	2	ND	ND	ND	ND	ND	ND	ND	120

ENSOLUM

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
JRU DI 1A Battery
XTO Energy, Inc
Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
BH24-13	06/28/2024	0	ND	ND	ND	14	ND	14	14	470
BH24-13	06/28/2024	2	ND	ND	ND	ND	ND	ND	ND	170
BH24-14	06/28/2024	0	ND	ND	ND	11	ND	11	11	320
BH24-14	06/28/2024	2	ND	ND	ND	ND	ND	ND	ND	330
~~BH24-16~~	~~06/29/2024~~	~~0~~	~~ND~~	~~ND~~	~~ND~~	~~ND~~	~~ND~~	~~ND~~	~~ND~~	~~610~~
BH24-16	06/29/2024	2	ND	ND	ND	ND	ND	ND	ND	150
~~BH01~~	~~12/02/2024~~	~~1~~	~~<0.050~~	~~<0.300~~	~~<10.0~~	~~<10.0~~	~~<10.0~~	~~<10.0~~	~~<10.0~~	~~4,080~~
BH01A	12/02/2024	9	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	384
~~BH02~~	~~12/02/2024~~	~~1~~	~~<0.050~~	~~<0.300~~	~~<10.0~~	~~<10.0~~	~~<10.0~~	~~<10.0~~	~~<10.0~~	~~4,960~~
BH02A	12/02/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	400
Confirmation Soil Samples										
FS01	12/02/2024	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	224
FS02	12/02/2024	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	**4,000**
FS03	12/02/2024	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	**2,600**
FS04	12/02/2024	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	**2,160**
FS05	12/02/2024	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	**5,280**
FS06	12/02/2024	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	464
FS07	12/02/2024	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	432
FS08	12/02/2024	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	144
FS09	12/02/2024	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	224
FS10	12/02/2024	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	208
SW01	12/02/2024	0-4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	160
SW02	12/02/2024	0-1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	**4,240**
SW03	12/02/2024	0-1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	**2,520**
SW04	12/02/2024	0-1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	**7,120**
SW05	12/02/2024	0-1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	**5,440**
SW06	12/02/2024	0-1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	176

ENSOLUM

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
JRU DI 1A Battery
XTO Energy, Inc
Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			**10**	**50**	**NE**	**NE**	**NE**	**NE**	**100**	**600**
SW07	12/02/2024	0-1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	208
SW08	12/02/2024	0-1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	160
SW09	12/02/2024	0-1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	240
SW10	12/02/2024	0-1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	192

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

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

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

NMAC: New Mexico Administrative Code

~~Grey~~ text indicates soil sample removed during excavation activities

ND: Non-detectable concentrations

ENSOLUM

APPENDIX A

August 3, 2024 *Remediation Work Plan*

General Information

NMOCD District:	District 2	Incident ID:	nAPP2411739118
Landowner:	Federal	Facility:	fAPP2123053722
Client:	XTO Energy, Inc.	Site Location:	James Ranch Unit DI 1A Battery
Date:	August 3, 2024	Project #:	23E-04616
Client Contact:	Amy Ruth	Phone #:	432.661.0571
Vertex PM:	Sally Carttar	Phone #:	575.361.3561

Objective

The objective of the environmental remediation work plan is to identify exceedances found during the site assessment/characterization activity and propose an appropriate remediation technique to address the produced water release at James Ranch Unit DI 1A Battery. The release occurred due to corrosion of a pipeline and resulted in 15 barrels (bbl) of produced water to be released on the facility pad shown on Figure 1 (Attachment 1). Areas of environmental concern identified and delineated include around the production equipment. Closure criteria have been selected as per New Mexico Administrative Code (NMAC) 19.15.29. The closure criteria for the site are presented below in Table 1.

Table 1. Closure Criteria for Soils Impacted by a Release

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

TDS – Total dissolved solids
TPH – Total petroleum hydrocarbons = gasoline range organics (GRO) + diesel range organics (DRO) + motor oil range organics (MRO),
BTEX - Benzene, toluene, ethylbenzene, and xylenes

Site Assessment/Characterization

Site characterization was started on June 27, 2024, and concluded on June 29, 2024. A total of 16 sample points were established, and 38 samples were collected for field screening. Samples were obtained at two discrete depths for horizontal delineation, and samples at the greatest lateral limits below criteria were submitted to the laboratory for analysis. Vertical limits were not attainable with the tools available due to depth and will be completed at the time of remediation. In total, 36 samples were submitted to Eurofins Environmental Testing, Albuquerque, New Mexico, for analysis. The sample locations are presented on Figure 1 (Attachment 1). Laboratory analysis results have been compared to the above noted closure criteria and the results from the characterization activity are presented in Table 2 (Attachment 2). Exceedances to reclamation and remediation criteria are identified in the table as bold with grey background. Daily field reports and laboratory data reports are included in Attachments 3 and 4, respectively. All applicable research as it pertains to closure criteria selection is presented in Attachment 5.

Proposed Remedial Activities

Deferral Request

Based on the initial characterization of the impacted area, it was determined that the dimensions of the impacted area extend around production equipment and underneath pipe racks and other associated infrastructure for the facility. Vertex Resource Services Inc. and

XTO Energy, Inc. would like to request a deferral for the impacted areas in immediate proximity to equipment and infrastructure. As the facility is active, excavation will be halted at 1 feet below ground surface (bgs) adjacent to equipment to preserve the structural integrity of the ground beneath equipment. This deferral is being requested due to safety concerns with operating near the production equipment. Remediation of the release area immediately under or around the production equipment will be deferred until such time as all oil and gas activities are terminated and the site is reclaimed per 19.15.29.13 NMAC. The deferral area and proposed excavations on the pad are included on Figure 2 (Attachment 1).

General

Areas identified with contaminant concentrations above closure criteria will be remediated through excavation. Field screening and laboratory results from the site assessment/characterization have been referenced to estimate both the vertical and horizontal limits of the impacts and the volume of soil to be removed. A total of 38 samples were collected for analysis. Soil will be excavated to the extents of the known impacts or in 1 foot increments, whichever is less. Field screening will be utilized to confirm removal of impacted soil below the applicable closure criteria. Excavated soils will be stored on a 30 mil liner prior to disposal at an approved facility. Once excavation is complete, confirmatory samples will be collected and laboratory analysis completed to confirm closure criteria guidelines are met. Excavations will be backfilled with clean soil sourced locally.

nAPP2411739118 (April 9, 2024) – Produced Water Released onto Pad

Exceedances to closure criteria were found at multiple sample points within the release area. The sample locations and proposed excavations are presented on Figures 1 and 2, respectively (Attachment 1). Hand tools will be used to excavate the material in proximity to equipment to 1 feet bgs. Vertical delineation at BH24-02 will be completed with a hand auger once excavation has lowered the ground surface at that location. Heavy equipment will be used to excavate the relatively open area covering the northeast corner of the release to 4 feet bgs. A hydrovac truck may be utilized to identify utility and buried pipelines where necessary, and hand tools will be utilized to remove impacted soil in close proximity to equipment, buried utility and pipelines. Confirmation samples will be collected as per New Mexico Oil Conservation Division guidance and submitted for laboratory analysis of all applicable parameters. The estimated volume to be excavated is approximately **95 cubic yards.** Excavation is planned to be completed within 90 days of approval of this Environmental Site Remediation Work Plan. The completed NMCOD C-141 Report for the incident and the approved 90-day extension for characterization and remediation plan are presented in Attachment 6.

Sample Point	Excavation Depth	Remediation Method
BH24-01	1'	Handcrew
BH24-02	1'	Handcrew
BH24-03	1'	Handcrew
BH24-04	1'	Handcrew
BH24-06	1'	Handcrew
BH24-07	1'	Handcrew
BH24-08	1'	Handcrew
BH24-09	4'	Backhoe/Hydrovac/Handcrew
BH24-10	1'	Handcrew
BH24-15	1'	Handcrew
BH24-16	1'	Handcrew

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

Lakin Pullman

Lakin Pullman, B.Sc.
ENVIRONMENTAL SPECIALIST, REPORTING

August 3, 2024
Date

Sally Carttar

Sally Carttar, BA.
PROJECT MANAGER, REPORT REVIEW

August 27, 2024
Date

Attachments

Attachment 1. Characterization Sampling and Proposed Excavation Schematics
Attachment 2. Initial Characterization Sample Field Screen and Laboratory Results – Depth to Groundwater <50 feet bgs
Attachment 3. Daily Field Reports with Photographs
Attachment 4. Laboratory Data Reports with Chain of Custody Forms
Attachment 5. Closure Criteria Research
Attachment 6. NMOCD C-141 Report

ATTACHMENT 1

Borehole (Prefixed by "BH24-")

Pipeline (Underground)

Release Area (~2,123 sq.ft. | 219 ft.)

Electrical Line (Underground)

Infrastructure

VERTEX

0 5 10 20 ft

NAD 1983 UTM Zone 13N

Date: Aug 01/24

Map Center:
Lat: 32.379834,
Long:-103.886670

N

Characterization Sampling Site Schematic
James Ranch Unit DI 1A Battery

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: Image from Google Earth Pro, 2023; georeferenced by Vertex Professional Services Ltd. (Vertex), 2024. Site features from GPS by Vertex Professional Services Ltd, 2024.

VERSATILITY. EXPERTISE.

Document Path: G:\1-Projects_US PROJECTS\XTO Energy\23E-04616 - JRU DI 1A CTB\Figure 1 Characterization Sample Site Schematic (23E-04616)ID19059.mxd

- Borehole (Prefixed by "BH24-")
- Electrical Line (Underground)
- Pipeline (Underground)
- Deferral Area (~3,360 sq.ft. | 461 ft.)
- Center Proposed Excavation to 1' bgs (~320 sq.ft | 87 ft.)
- North Proposed Excavation to 1' bgs (~102 sq.ft. | 70 ft.)
- South Proposed Excavation to 1' bgs (~93 sq.ft. | 42 ft.)
- West Proposed Excavation to 1' bgs (~578 sq.ft. | 136 ft.)
- Proposed Excavation to 4' bgs (~198 sq.ft. | 56 ft.)

VERTEX

0 5 10 20 ft
NAD 1983 UTM Zone 13N
Date: Aug 01/24

Map Center:
Lat: 32.379936,
Long:-103.886659

N

Proposed Excavation Schematic
James Ranch Unit DI 1A Battery

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: Image from Google Earth Pro, 2023; georeferenced by Vertex Professional Services Ltd. (Vertex), 2024. Site features from GPS by Vertex Professional Services Ltd, 2024.

VERSATILITY. EXPERTISE.

Document Path: G:\1-Projects_US PROJECTS\XTO Energy\23E-04616 - JRU DI 1A CTB\Figure 2 Proposed Excavation Schematic (23E-04616)ID19059.mxd

ATTACHMENT 2

Client Name: XTO Energy, Inc.
Site Name: James Ranch Unit DI 1A Battery
NMOCD Tracking #: nAPP2411739118
Project #: 23E-04616
Lab Reports: 885-7159-1 and 885-7239-1

Table 2. Initial Characterization Sample Field Screen and Laboratory Results - Depth to Groundwater <50 feet bgs

Sample Description			Field Screening		Petroleum Hydrocarbons							Inorganic
					Volatile		Extractable					
Sample ID	Depth (ft)	Sample Date	Extractable Organic Compounds (PetroFlag)	Chloride Concentration	Benzene	BTEX (Total)	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)	Motor Oil Range Organics (MRO)	(GRO + DRO)	Total Petroleum Hydrocarbons (TPH)	Chloride Concentration
			(ppm)	(ppm)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
BH24-01	0	June 27, 2024	73	1,883	ND	ND	ND	ND	ND	ND	ND	**1,600**
	2	June 27, 2024	69	143	ND	ND	ND	ND	ND	ND	ND	320
BH24-02	0	June 27, 2024	132	12,540	ND	ND	ND	ND	ND	ND	ND	**12,000**
	2	June 27, 2024	131	5,655	ND	ND	ND	ND	ND	ND	ND	**5,400**
	4	June 29, 2024	117	5,670	ND	ND	ND	36	53	36	89	**6,100**
	5	June 29, 2024	92	3,355	ND	ND	ND	ND	ND	ND	ND	**2,900**
	6	June 29, 2024	118	2,308	ND	ND	ND	ND	ND	ND	ND	**2,300**
	7	June 29, 2024	107	2,105	ND	ND	ND	ND	ND	ND	ND	**1,300**
	8	June 29, 2024	63	1,840	ND	ND	ND	ND	ND	ND	ND	**1,700**
BH24-03	0	June 27, 2024	47	10,845	ND	ND	ND	ND	ND	ND	ND	**12,000**
	2	June 27, 2024	78	1,413	ND	ND	ND	ND	ND	ND	ND	**2,600**
BH24-04	0	June 27, 2024	65	10,480	ND	ND	ND	ND	ND	ND	ND	**9,100**
	2	June 27, 2024	97	4,543	ND	ND	ND	ND	ND	ND	ND	**5,200**
BH24-05	0	June 27, 2024	64	595	ND	ND	ND	ND	ND	ND	ND	390
	2	June 27, 2024	59	338	ND	ND	ND	ND	ND	ND	ND	250
BH24-06	0	June 27, 2024	78	9,898	ND	ND	ND	ND	ND	ND	ND	**9,100**
	2	June 27, 2024	55	843	ND	ND	ND	ND	ND	ND	ND	**670**
BH24-07	0	June 27, 2024	50	4,203	ND	ND	ND	ND	ND	ND	ND	**3,200**
	2	June 27, 2024	31	1,108	ND	ND	ND	ND	ND	ND	ND	**960**
	4	June 29, 2024	34	248	ND	ND	ND	ND	ND	ND	ND	110
BH24-08	0	June 27, 2024	61	1,170	ND	ND	ND	ND	ND	ND	ND	**1,200**
	2	June 27, 2024	59	2,668	ND	ND	ND	ND	ND	ND	ND	**2,500**
BH24-09	0	June 28, 2024	94	9,855	ND	ND	ND	ND	ND	ND	ND	**8,800**
	2	June 28, 2024	82	2,305	ND	ND	ND	ND	ND	ND	ND	**3,300**
BH24-10	0	June 28, 2024	70	8,205	ND	ND	ND	ND	ND	ND	ND	**7,200**
	2	June 28, 2024	74	3,120	ND	ND	ND	ND	ND	ND	ND	**4,000**
BH24-11	0	June 28, 2024	67	428	ND	ND	ND	ND	ND	ND	ND	340
	2	June 28, 2024	43	233	ND	ND	ND	ND	ND	ND	ND	150
BH24-12	0	June 28, 2024	38	338	ND	ND	ND	ND	ND	ND	ND	150
	2	June 28, 2024	34	245	ND	ND	ND	ND	ND	ND	ND	120
BH24-13	0	June 28, 2024	127	588	ND	ND	ND	14	ND	14	14	470
	2	June 28, 2024	61	263	ND	ND	ND	ND	ND	ND	ND	170
BH24-14	0	June 28, 2024	77	415	ND	ND	ND	11	ND	11	11	320
	2	June 28, 2024	66	225	ND	ND	ND	ND	ND	ND	ND	330
BH24-15	0	June 29, 2024	159	845	-	-	-	-	-	-	-	-
	2	June 29, 2024	65	210	-	-	-	-	-	-	-	-
BH24-16	0	June 29, 2024	155	850	ND	ND	ND	ND	ND	ND	ND	**610**
	2	June 29, 2024	61	278	ND	ND	ND	ND	ND	ND	ND	150

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

VERTEX

ATTACHMENT 3

Daily Site Visit Report

Client:	XTO Energy Inc. (US)	Inspection Date:	6/27/2024
Site Location Name:	JRU DI 1A CTB	Report Run Date:	6/28/2024 12:07 AM
Client Contact Name:	Marshall Boles	API #:	
Client Contact Phone #:	(806) 367-2174		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	6/27/2024 7:54 AM
Departed Site	6/27/2024 4:26 PM

Field Notes

17:58 Informed Wes Byrd of my arrival and assessed site for hazards. Filled out and reviewed safety documentation.

On site to begin delineation around release nAPP2411739118

8:46 Located proposed boreholes via gps and marked samples sites BH24-01 through BH24-07 with white paint.

17:55 Collected BH24-01 through -08 at surface (0') and 2' depths.

17:56 All samples field screened for chlorides using titration. All samples tested out of spec except BH24-05 at 0'band 2'.

17:57 All samples field screened for TPH using petroflag. All samples passed field screening criteria except BH24-02 at 0' and 2'.

17:57 All samples jarred and will be sent to laboratory for analysis.

Next Steps & Recommendations

1 Continue to delineate edges of release and get vertical delineation

Daily Site Visit Report

Site Photos

Viewing Direction: South	**Viewing Direction**: South
	
Area of release - nAPP2411739118	BH24-01 at 0’ and 2’ depths
Viewing Direction: West	**Viewing Direction**: West
	
BH24-02 at 0’ and 2’ depths	BH24-03 at 0’ and 2’ depths

Daily Site Visit Report

Viewing Direction: North	**Viewing Direction**: North
	
BH24-04 at 0’ and 2’ depths	BH24-05 at 0’ and 2’ depths
Viewing Direction: North	**Viewing Direction**: Northeast
	
BH24-06 at 0’ and 2’ depths	BH24-07 at 0’ and 2’ depths

Daily Site Visit Report

Viewing Direction: North

BH24-08 at 0’ and 2’ depths

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Andrew Ludvik

Signature: 

Daily Site Visit Report

Client:	XTO Energy Inc. (US)	Inspection Date:	6/28/2024
Site Location Name:	JRU DI 1A CTB	Report Run Date:	6/28/2024 11:20 PM
Client Contact Name:	Marshall Boles	API #:	
Client Contact Phone #:	(806) 367-2174		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	6/28/2024 7:48 AM
Departed Site	6/28/2024 3:45 PM

Field Notes

17:01 Informed Wes Byrd of my arrival and assessed site for hazards. Filled out and reviewed safety documentation.

On site to continue delineation around release nAPP2411739118, with the aim of obtaining east, west, and not horizontal edges.

17:01 Located proposed boreholes via gps and marked samples sites BH24-09 through BH24-12 with white paint.

17:08 Collected BH24-09 through -12 at surface (0') and 2' depths.

Field screened all samples for chlorides using titration. BH24-09 and -10 tested out of spec at both depths. -11 and -12 passed field screening criteria at both depths

17:09 All samples field screened for TPH using petroflag. All samples passed field screening criteria.

17:09 Collected BH24-13 (bumped out from -09) and BH24-14 (bumped out from -10)

Field screened all samples for chlorides using titration. All samples passed criteria

17:10 BH24-13 and -14 at 0' and 2' field screened for TPH using petroflag. All samples passed field screening criteria except BH24-13 at 0'.

17:10 All samples jarred and will be sent to lab for analysis

Daily Site Visit Report

Next Steps & Recommendations

1 Obtain north horizontal edge and vertical delineation

Daily Site Visit Report

Site Photos

Viewing Direction: Southeast

BH24-09 at surface (0’) and 2’

Viewing Direction: South

BH24-10 at surface (0’) and 2’

Viewing Direction: Northwest

BH24-11 at surface (0’) and 2’

Viewing Direction: East

BH24-12 at surface (0’) and 2’

Daily Site Visit Report

Viewing Direction: South	**Viewing Direction**: West
	
BH24-13 at surface (0') and 2'	BH24-14 at surface (0') and 2'

Viewing Direction: South	**Viewing Direction**: East
	
Overview of sampled area	Overview of sampled area

Daily Site Visit Report

Daily Site Visit Signature

Inspector: Andrew Ludvik

Signature: 

ATTACHMENT 4

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Ms. Sally Carttar
Vertex
3101 Boyd Dr
Carlsbad, New Mexico 88220

Generated 7/9/2024 11:51:23 AM

JOB DESCRIPTION

JRU D1 1ACTB

JOB NUMBER

885-7159-1

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
7/9/2024 11:51:23 AM

Authorized for release by
Andy Freeman, Business Unit Manager
andy.freeman@et.eurofinsus.com
(505)345-3975

Client: Vertex
Project/Site: JRU D1 1ACTB

Laboratory Job ID: 885-7159-1

Table of Contents

Definitions/Glossary

Client: Vertex Job ID: 885-7159-1
Project/Site: JRU D1 1ACTB

Qualifiers

GC VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high biased.

HPLC/IC

Qualifier	Qualifier Description
F2	MS/MSD RPD 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: JRU D1 1ACTB

Job ID: 885-7159-1

Job ID: 885-7159-1 Eurofins Albuquerque

Job Narrative
885-7159-1

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 6/29/2024 6:15 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 2.0°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 D1 1ACTB

Job ID: 885-7159-1

Client Sample ID: BH24-01 0.0'

Date Collected: 06/27/24 08:55
Date Received: 06/29/24 06:15

Lab Sample ID: 885-7159-1

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		5.0		mg/Kg		07/01/24 14:00	07/03/24 03:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*35 - 166*	*07/01/24 14:00*	*07/03/24 03:30*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		07/01/24 14:00	07/03/24 03:30	1
Ethylbenzene	ND		0.050		mg/Kg		07/01/24 14:00	07/03/24 03:30	1
Toluene	ND		0.050		mg/Kg		07/01/24 14:00	07/03/24 03:30	1
Xylenes, Total	ND		0.099		mg/Kg		07/01/24 14:00	07/03/24 03:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*48 - 145*	*07/01/24 14:00*	*07/03/24 03:30*	*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		10		mg/Kg		07/02/24 08:13	07/02/24 13:35	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		07/02/24 08:13	07/02/24 13:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*88*		*62 - 134*	*07/02/24 08:13*	*07/02/24 13:35*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1600**		150		mg/Kg		07/02/24 12:18	07/03/24 22:44	50

Client Sample Results

Client: Vertex
Project/Site: JRU D1 1ACTB

Job ID: 885-7159-1

Client Sample ID: BH24-01 2.0'

Date Collected: 06/27/24 09:00
Date Received: 06/29/24 06:15

Lab Sample ID: 885-7159-2

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		4.9		mg/Kg		07/01/24 14:00	07/03/24 03:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*35 - 166*	*07/01/24 14:00*	*07/03/24 03:53*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		07/01/24 14:00	07/03/24 03:53	1
Ethylbenzene	ND		0.049		mg/Kg		07/01/24 14:00	07/03/24 03:53	1
Toluene	ND		0.049		mg/Kg		07/01/24 14:00	07/03/24 03:53	1
Xylenes, Total	ND		0.098		mg/Kg		07/01/24 14:00	07/03/24 03:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*48 - 145*	*07/01/24 14:00*	*07/03/24 03:53*	*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		9.1		mg/Kg		07/02/24 08:13	07/02/24 13:46	1
Motor Oil Range Organics [C28-C40]	ND		46		mg/Kg		07/02/24 08:13	07/02/24 13:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*87*		*62 - 134*	*07/02/24 08:13*	*07/02/24 13:46*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**320**	**F2**	59		mg/Kg		07/02/24 12:18	07/02/24 15:11	20

Client Sample Results

Client: Vertex
Project/Site: JRU D1 1ACTB

Job ID: 885-7159-1

Client Sample ID: BH24-02 0.0'

Date Collected: 06/27/24 09:05
Date Received: 06/29/24 06:15

Lab Sample ID: 885-7159-3

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		4.9		mg/Kg		07/01/24 14:00	07/03/24 04:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*35 - 166*	*07/01/24 14:00*	*07/03/24 04:17*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		07/01/24 14:00	07/03/24 04:17	1
Ethylbenzene	ND		0.049		mg/Kg		07/01/24 14:00	07/03/24 04:17	1
Toluene	ND		0.049		mg/Kg		07/01/24 14:00	07/03/24 04:17	1
Xylenes, Total	ND		0.097		mg/Kg		07/01/24 14:00	07/03/24 04:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*48 - 145*	*07/01/24 14:00*	*07/03/24 04:17*	*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		10		mg/Kg		07/02/24 08:13	07/02/24 13:57	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		07/02/24 08:13	07/02/24 13:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*90*		*62 - 134*	*07/02/24 08:13*	*07/02/24 13:57*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**12000**		600		mg/Kg		07/02/24 12:18	07/03/24 23:33	200

Client Sample Results

Client: Vertex
Project/Site: JRU D1 1ACTB

Job ID: 885-7159-1

Client Sample ID: BH24-02 2.0'

Date Collected: 06/27/24 09:10
Date Received: 06/29/24 06:15

Lab Sample ID: 885-7159-4

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		4.9		mg/Kg		07/01/24 14:00	07/03/24 04:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*35 - 166*	*07/01/24 14:00*	*07/03/24 04:40*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		07/01/24 14:00	07/03/24 04:40	1
Ethylbenzene	ND		0.049		mg/Kg		07/01/24 14:00	07/03/24 04:40	1
Toluene	ND		0.049		mg/Kg		07/01/24 14:00	07/03/24 04:40	1
Xylenes, Total	ND		0.098		mg/Kg		07/01/24 14:00	07/03/24 04:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*48 - 145*	*07/01/24 14:00*	*07/03/24 04:40*	*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]	**12**		9.7		mg/Kg		07/02/24 08:13	07/02/24 14:08	1
Motor Oil Range Organics [C28-C40]	ND		49		mg/Kg		07/02/24 08:13	07/02/24 14:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*87*		*62 - 134*	*07/02/24 08:13*	*07/02/24 14:08*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**5400**		300		mg/Kg		07/02/24 12:18	07/04/24 00:23	100

Client Sample Results

Client: Vertex
Project/Site: JRU D1 1ACTB

Job ID: 885-7159-1

Client Sample ID: BH24-03 0.0'

Date Collected: 06/27/24 09:20
Date Received: 06/29/24 06:15

Lab Sample ID: 885-7159-5

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		4.7		mg/Kg		07/01/24 14:00	07/03/24 05:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*35 - 166*	*07/01/24 14:00*	*07/03/24 05:03*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		07/01/24 14:00	07/03/24 05:03	1
Ethylbenzene	ND		0.047		mg/Kg		07/01/24 14:00	07/03/24 05:03	1
Toluene	ND		0.047		mg/Kg		07/01/24 14:00	07/03/24 05:03	1
Xylenes, Total	ND		0.094		mg/Kg		07/01/24 14:00	07/03/24 05:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*86*		*48 - 145*	*07/01/24 14:00*	*07/03/24 05:03*	*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		9.8		mg/Kg		07/02/24 08:13	07/02/24 14:19	1
Motor Oil Range Organics [C28-C40]	ND		49		mg/Kg		07/02/24 08:13	07/02/24 14:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*84*		*62 - 134*	*07/02/24 08:13*	*07/02/24 14:19*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**12000**		600		mg/Kg		07/02/24 12:18	07/03/24 23:46	200

Client Sample Results

Client: Vertex
Project/Site: JRU D1 1ACTB

Job ID: 885-7159-1

Client Sample ID: BH24-03 2.0'

Date Collected: 06/27/24 09:25
Date Received: 06/29/24 06:15

Lab Sample ID: 885-7159-6

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		07/01/24 14:00	07/03/24 05:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*35 - 166*	*07/01/24 14:00*	*07/03/24 05:27*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		07/01/24 14:00	07/03/24 05:27	1
Ethylbenzene	ND		0.048		mg/Kg		07/01/24 14:00	07/03/24 05:27	1
Toluene	ND		0.048		mg/Kg		07/01/24 14:00	07/03/24 05:27	1
Xylenes, Total	ND		0.097		mg/Kg		07/01/24 14:00	07/03/24 05:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*83*		*48 - 145*	*07/01/24 14:00*	*07/03/24 05:27*	*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		9.3		mg/Kg		07/02/24 08:13	07/02/24 14:30	1
Motor Oil Range Organics [C28-C40]	ND		46		mg/Kg		07/02/24 08:13	07/02/24 14:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*95*		*62 - 134*	*07/02/24 08:13*	*07/02/24 14:30*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2600**		150		mg/Kg		07/02/24 12:18	07/03/24 22:56	50

Client Sample Results

Client: Vertex
Project/Site: JRU D1 1ACTB

Job ID: 885-7159-1

Client Sample ID: BH24-04 0.0'

Date Collected: 06/27/24 09:30
Date Received: 06/29/24 06:15

Lab Sample ID: 885-7159-7

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		07/01/24 14:00	07/03/24 05:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*35 - 166*	*07/01/24 14:00*	*07/03/24 05:50*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		07/01/24 14:00	07/03/24 05:50	1
Ethylbenzene	ND		0.048		mg/Kg		07/01/24 14:00	07/03/24 05:50	1
Toluene	ND		0.048		mg/Kg		07/01/24 14:00	07/03/24 05:50	1
Xylenes, Total	ND		0.096		mg/Kg		07/01/24 14:00	07/03/24 05:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*83*		*48 - 145*	*07/01/24 14:00*	*07/03/24 05:50*	*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		07/02/24 08:13	07/02/24 14:41	1
Motor Oil Range Organics [C28-C40]	ND		49		mg/Kg		07/02/24 08:13	07/02/24 14:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*85*		*62 - 134*	*07/02/24 08:13*	*07/02/24 14:41*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**9100**		600		mg/Kg		07/02/24 12:18	07/03/24 23:58	200

Client Sample Results

Client: Vertex
Project/Site: JRU D1 1ACTB

Job ID: 885-7159-1

Client Sample ID: BH24-04 2.0'

Date Collected: 06/27/24 09:35
Date Received: 06/29/24 06:15

Lab Sample ID: 885-7159-8

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		4.9		mg/Kg		07/01/24 14:00	07/03/24 06:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*35 - 166*	*07/01/24 14:00*	*07/03/24 06:14*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		07/01/24 14:00	07/03/24 06:14	1
Ethylbenzene	ND		0.049		mg/Kg		07/01/24 14:00	07/03/24 06:14	1
Toluene	ND		0.049		mg/Kg		07/01/24 14:00	07/03/24 06:14	1
Xylenes, Total	ND		0.099		mg/Kg		07/01/24 14:00	07/03/24 06:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*48 - 145*	*07/01/24 14:00*	*07/03/24 06:14*	*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		9.8		mg/Kg		07/02/24 08:13	07/02/24 14:52	1
Motor Oil Range Organics [C28-C40]	ND		49		mg/Kg		07/02/24 08:13	07/02/24 14:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*89*		*62 - 134*	*07/02/24 08:13*	*07/02/24 14:52*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**5200**		300		mg/Kg		07/02/24 12:18	07/04/24 00:35	100

Client Sample Results

Client: Vertex
Project/Site: JRU D1 1ACTB

Job ID: 885-7159-1

Client Sample ID: BH24-05 0.0'

Date Collected: 06/27/24 10:00
Date Received: 06/29/24 06:15

Lab Sample ID: 885-7159-9

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		4.9		mg/Kg		07/01/24 14:00	07/03/24 06:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*35 - 166*	*07/01/24 14:00*	*07/03/24 06:37*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		07/01/24 14:00	07/03/24 06:37	1
Ethylbenzene	ND		0.049		mg/Kg		07/01/24 14:00	07/03/24 06:37	1
Toluene	ND		0.049		mg/Kg		07/01/24 14:00	07/03/24 06:37	1
Xylenes, Total	ND		0.098		mg/Kg		07/01/24 14:00	07/03/24 06:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*86*		*48 - 145*	*07/01/24 14:00*	*07/03/24 06:37*	*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		9.6		mg/Kg		07/02/24 08:13	07/02/24 15:03	1
Motor Oil Range Organics [C28-C40]	ND		48		mg/Kg		07/02/24 08:13	07/02/24 15:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*86*		*62 - 134*	*07/02/24 08:13*	*07/02/24 15:03*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**390**		60		mg/Kg		07/02/24 12:18	07/02/24 17:33	20

Client Sample Results

Client: Vertex
Project/Site: JRU D1 1ACTB

Job ID: 885-7159-1

Client Sample ID: BH24-05 2.0'

Date Collected: 06/27/24 10:05
Date Received: 06/29/24 06:15

Lab Sample ID: 885-7159-10

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		4.9		mg/Kg		07/01/24 14:00	07/03/24 07:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*35 - 166*	*07/01/24 14:00*	*07/03/24 07:24*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		07/01/24 14:00	07/03/24 07:24	1
Ethylbenzene	ND		0.049		mg/Kg		07/01/24 14:00	07/03/24 07:24	1
Toluene	ND		0.049		mg/Kg		07/01/24 14:00	07/03/24 07:24	1
Xylenes, Total	ND		0.098		mg/Kg		07/01/24 14:00	07/03/24 07:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*86*		*48 - 145*	*07/01/24 14:00*	*07/03/24 07:24*	*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		9.8		mg/Kg		07/02/24 08:13	07/02/24 15:14	1
Motor Oil Range Organics [C28-C40]	ND		49		mg/Kg		07/02/24 08:13	07/02/24 15:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*89*		*62 - 134*	*07/02/24 08:13*	*07/02/24 15:14*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**250**		60		mg/Kg		07/02/24 12:18	07/02/24 17:45	20

Client Sample Results

Client: Vertex
Project/Site: JRU D1 1ACTB

Job ID: 885-7159-1

Client Sample ID: BH24-06 0.0'

Date Collected: 06/27/24 10:10
Date Received: 06/29/24 06:15

Lab Sample ID: 885-7159-11

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		07/01/24 14:00	07/03/24 07:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*35 - 166*	*07/01/24 14:00*	*07/03/24 07:47*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		07/01/24 14:00	07/03/24 07:47	1
Ethylbenzene	ND		0.050		mg/Kg		07/01/24 14:00	07/03/24 07:47	1
Toluene	ND		0.050		mg/Kg		07/01/24 14:00	07/03/24 07:47	1
Xylenes, Total	ND		0.10		mg/Kg		07/01/24 14:00	07/03/24 07:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*86*		*48 - 145*	*07/01/24 14:00*	*07/03/24 07:47*	*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		10		mg/Kg		07/02/24 08:13	07/02/24 15:25	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		07/02/24 08:13	07/02/24 15:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*90*		*62 - 134*	*07/02/24 08:13*	*07/02/24 15:25*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**9100**		600		mg/Kg		07/02/24 12:18	07/04/24 00:10	200

Client Sample Results

Client: Vertex
Project/Site: JRU D1 1ACTB

Job ID: 885-7159-1

Client Sample ID: BH24-06 2.0'

Date Collected: 06/27/24 10:15
Date Received: 06/29/24 06:15

Lab Sample ID: 885-7159-12

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		4.9		mg/Kg		07/01/24 14:00	07/03/24 08:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*35 - 166*	*07/01/24 14:00*	*07/03/24 08:11*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		07/01/24 14:00	07/03/24 08:11	1
Ethylbenzene	ND		0.049		mg/Kg		07/01/24 14:00	07/03/24 08:11	1
Toluene	ND		0.049		mg/Kg		07/01/24 14:00	07/03/24 08:11	1
Xylenes, Total	ND		0.098		mg/Kg		07/01/24 14:00	07/03/24 08:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*48 - 145*	*07/01/24 14:00*	*07/03/24 08:11*	*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		9.3		mg/Kg		07/02/24 08:13	07/02/24 15:38	1
Motor Oil Range Organics [C28-C40]	ND		47		mg/Kg		07/02/24 08:13	07/02/24 15:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*91*		*62 - 134*	*07/02/24 08:13*	*07/02/24 15:38*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**670**		60		mg/Kg		07/02/24 12:18	07/02/24 18:11	20

Client Sample Results

Client: Vertex
Project/Site: JRU D1 1ACTB

Job ID: 885-7159-1

Client Sample ID: BH24-07 0.0'

Date Collected: 06/27/24 10:20
Date Received: 06/29/24 06:15

Lab Sample ID: 885-7159-13

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		07/02/24 13:17	07/03/24 11:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*35 - 166*	*07/02/24 13:17*	*07/03/24 11:52*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		07/02/24 13:17	07/03/24 11:52	1
Ethylbenzene	ND		0.050		mg/Kg		07/02/24 13:17	07/03/24 11:52	1
Toluene	ND		0.050		mg/Kg		07/02/24 13:17	07/03/24 11:52	1
Xylenes, Total	ND		0.10		mg/Kg		07/02/24 13:17	07/03/24 11:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*48 - 145*	*07/02/24 13:17*	*07/03/24 11:52*	*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		9.5		mg/Kg		07/03/24 09:46	07/03/24 12:56	1
Motor Oil Range Organics [C28-C40]	ND		47		mg/Kg		07/03/24 09:46	07/03/24 12:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*88*		*62 - 134*	*07/03/24 09:46*	*07/03/24 12:56*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3200**		150		mg/Kg		07/03/24 12:45	07/05/24 15:25	50

Client Sample Results

Client: Vertex
Project/Site: JRU D1 1ACTB

Job ID: 885-7159-1

Client Sample ID: BH24-07 2.0'

Date Collected: 06/27/24 10:30
Date Received: 06/29/24 06:15

Lab Sample ID: 885-7159-14

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		07/02/24 13:17	07/03/24 12:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*35 - 166*	*07/02/24 13:17*	*07/03/24 12:58*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		07/02/24 13:17	07/03/24 12:58	1
Ethylbenzene	ND		0.050		mg/Kg		07/02/24 13:17	07/03/24 12:58	1
Toluene	ND		0.050		mg/Kg		07/02/24 13:17	07/03/24 12:58	1
Xylenes, Total	ND		0.099		mg/Kg		07/02/24 13:17	07/03/24 12:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*48 - 145*	*07/02/24 13:17*	*07/03/24 12:58*	*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		10		mg/Kg		07/03/24 09:46	07/03/24 13:07	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		07/03/24 09:46	07/03/24 13:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*90*		*62 - 134*	*07/03/24 09:46*	*07/03/24 13:07*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**960**		60		mg/Kg		07/03/24 12:45	07/03/24 17:35	20

Client Sample Results

Client: Vertex
Project/Site: JRU D1 1ACTB

Job ID: 885-7159-1

Client Sample ID: BH24-08 0.0'

Date Collected: 06/27/24 13:00
Date Received: 06/29/24 06:15

Lab Sample ID: 885-7159-15

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		07/02/24 13:17	07/03/24 14:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*35 - 166*	*07/02/24 13:17*	*07/03/24 14:03*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		07/02/24 13:17	07/03/24 14:03	1
Ethylbenzene	ND		0.050		mg/Kg		07/02/24 13:17	07/03/24 14:03	1
Toluene	ND		0.050		mg/Kg		07/02/24 13:17	07/03/24 14:03	1
Xylenes, Total	ND		0.099		mg/Kg		07/02/24 13:17	07/03/24 14:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*48 - 145*	*07/02/24 13:17*	*07/03/24 14:03*	*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		9.6		mg/Kg		07/03/24 09:46	07/03/24 13:18	1
Motor Oil Range Organics [C28-C40]	ND		48		mg/Kg		07/03/24 09:46	07/03/24 13:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*87*		*62 - 134*	*07/03/24 09:46*	*07/03/24 13:18*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1200**		60		mg/Kg		07/03/24 12:45	07/03/24 17:47	20

Client Sample Results

Client: Vertex
Project/Site: JRU D1 1ACTB

Job ID: 885-7159-1

Client Sample ID: BH24-08 2.0'

Date Collected: 06/27/24 13:05
Date Received: 06/29/24 06:15

Lab Sample ID: 885-7159-16

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		4.9		mg/Kg		07/02/24 13:17	07/03/24 14:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*35 - 166*	*07/02/24 13:17*	*07/03/24 14:25*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		07/02/24 13:17	07/03/24 14:25	1
Ethylbenzene	ND		0.049		mg/Kg		07/02/24 13:17	07/03/24 14:25	1
Toluene	ND		0.049		mg/Kg		07/02/24 13:17	07/03/24 14:25	1
Xylenes, Total	ND		0.099		mg/Kg		07/02/24 13:17	07/03/24 14:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*48 - 145*	*07/02/24 13:17*	*07/03/24 14:25*	*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		07/03/24 09:46	07/03/24 13:28	1
Motor Oil Range Organics [C28-C40]	ND		49		mg/Kg		07/03/24 09:46	07/03/24 13:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*91*		*62 - 134*	*07/03/24 09:46*	*07/03/24 13:28*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2500**		150		mg/Kg		07/03/24 12:45	07/05/24 15:37	50

QC Sample Results

Client: Vertex
Project/Site: JRU D1 1ACTB

Job ID: 885-7159-1

Method: 8015M/D - Gasoline Range Organics (GRO) (GC)

Lab Sample ID: MB 885-7717/1-A
Matrix: Solid
Analysis Batch: 7830

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 7717

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		5.0		mg/Kg		07/01/24 14:00	07/02/24 21:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*35 - 166*	*07/01/24 14:00*	*07/02/24 21:38*	*1*

Lab Sample ID: LCS 885-7717/2-A
Matrix: Solid
Analysis Batch: 7830

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 7717

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			25.0	23.7		mg/Kg		95	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*195*	*S1+*	*35 - 166*

Lab Sample ID: MB 885-7806/1-A
Matrix: Solid
Analysis Batch: 7936

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 7806

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		5.0		mg/Kg		07/02/24 13:17	07/03/24 11:30	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*35 - 166*	*07/02/24 13:17*	*07/03/24 11:30*	*1*

Lab Sample ID: LCS 885-7806/2-A
Matrix: Solid
Analysis Batch: 7936

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 7806

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			25.0	24.5		mg/Kg		98	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*206*	*S1+*	*35 - 166*

Lab Sample ID: 885-7159-13 MS
Matrix: Solid
Analysis Batch: 7936

Client Sample ID: BH24-07 0.0'
Prep Type: Total/NA
Prep Batch: 7806

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	ND		25.0	28.0		mg/Kg		112	70 - 130		

QC Sample Results

Client: Vertex
Project/Site: JRU D1 1ACTB

Job ID: 885-7159-1

Method: 8015M/D - Gasoline Range Organics (GRO) (GC) (Continued)

Lab Sample ID: 885-7159-13 MS
Matrix: Solid
Analysis Batch: 7936

Client Sample ID: BH24-07 0.0'
Prep Type: Total/NA
Prep Batch: 7806

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	*226*	*S1+*	*35 - 166*

Lab Sample ID: 885-7159-13 MSD
Matrix: Solid
Analysis Batch: 7936

Client Sample ID: BH24-07 0.0'
Prep Type: Total/NA
Prep Batch: 7806

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	ND		24.8	25.9		mg/Kg		105	70 - 130	8	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	*211*	*S1+*	*35 - 166*

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 885-7717/1-A
Matrix: Solid
Analysis Batch: 7831

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 7717

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		07/01/24 14:00	07/02/24 21:38	1
Ethylbenzene	ND		0.050		mg/Kg		07/01/24 14:00	07/02/24 21:38	1
Toluene	ND		0.050		mg/Kg		07/01/24 14:00	07/02/24 21:38	1
Xylenes, Total	ND		0.10		mg/Kg		07/01/24 14:00	07/02/24 21:38	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*84*		*48 - 145*	*07/01/24 14:00*	*07/02/24 21:38*	*1*

Lab Sample ID: LCS 885-7717/3-A
Matrix: Solid
Analysis Batch: 7831

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 7717

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	1.00	0.805		mg/Kg		81	70 - 130
Ethylbenzene	1.00	0.789		mg/Kg		79	70 - 130
m-Xylene & p-Xylene	2.00	1.61		mg/Kg		80	70 - 130
o-Xylene	1.00	0.785		mg/Kg		78	70 - 130
Toluene	1.00	0.776		mg/Kg		78	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	*87*		*48 - 145*

Lab Sample ID: MB 885-7806/1-A
Matrix: Solid
Analysis Batch: 7937

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 7806

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		07/02/24 13:17	07/03/24 11:30	1

QC Sample Results

Client: Vertex
Project/Site: JRU D1 1ACTB

Job ID: 885-7159-1

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

Lab Sample ID: MB 885-7806/1-A
Matrix: Solid
Analysis Batch: 7937

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 7806

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		0.050		mg/Kg		07/02/24 13:17	07/03/24 11:30	1
Toluene	ND		0.050		mg/Kg		07/02/24 13:17	07/03/24 11:30	1
Xylenes, Total	ND		0.10		mg/Kg		07/02/24 13:17	07/03/24 11:30	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*48 - 145*	*07/02/24 13:17*	*07/03/24 11:30*	*1*

Lab Sample ID: LCS 885-7806/3-A
Matrix: Solid
Analysis Batch: 7937

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 7806

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			1.00	0.775		mg/Kg		77	70 - 130		
Ethylbenzene			1.00	0.847		mg/Kg		85	70 - 130		
m-Xylene & p-Xylene			2.00	1.70		mg/Kg		85	70 - 130		
o-Xylene			1.00	0.851		mg/Kg		85	70 - 130		
Toluene			1.00	0.815		mg/Kg		82	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*93*		*48 - 145*

Lab Sample ID: 885-7159-14 MS
Matrix: Solid
Analysis Batch: 7937

Client Sample ID: BH24-07 2.0'
Prep Type: Total/NA
Prep Batch: 7806

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	ND		0.996	0.839		mg/Kg		84	70 - 130		
Ethylbenzene	ND		0.996	0.933		mg/Kg		94	70 - 130		
m-Xylene & p-Xylene	ND		1.99	1.87		mg/Kg		94	70 - 130		
o-Xylene	ND		0.996	0.944		mg/Kg		95	70 - 130		
Toluene	ND		0.996	0.897		mg/Kg		90	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*93*		*48 - 145*

Lab Sample ID: 885-7159-14 MSD
Matrix: Solid
Analysis Batch: 7937

Client Sample ID: BH24-07 2.0'
Prep Type: Total/NA
Prep Batch: 7806

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	ND		0.989	0.804		mg/Kg		81	70 - 130	4	20
Ethylbenzene	ND		0.989	0.919		mg/Kg		93	70 - 130	1	20
m-Xylene & p-Xylene	ND		1.98	1.84		mg/Kg		93	70 - 130	1	20
o-Xylene	ND		0.989	0.929		mg/Kg		94	70 - 130	2	20
Toluene	ND		0.989	0.871		mg/Kg		88	70 - 130	3	20

QC Sample Results

Client: Vertex
Project/Site: JRU D1 1ACTB

Job ID: 885-7159-1

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

Lab Sample ID: 885-7159-14 MSD
Matrix: Solid
Analysis Batch: 7937

Client Sample ID: BH24-07 2.0'
Prep Type: Total/NA
Prep Batch: 7806

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	*94*		*48 - 145*

Method: 8015M/D - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 885-7742/1-A
Matrix: Solid
Analysis Batch: 7757

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 7742

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10		mg/Kg		07/02/24 08:13	07/02/24 11:38	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		07/02/24 08:13	07/02/24 11:38	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	*85*		*62 - 134*	*07/02/24 08:13*	*07/02/24 11:38*	*1*

Lab Sample ID: LCS 885-7742/2-A
Matrix: Solid
Analysis Batch: 7757

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 7742

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics [C10-C28]			50.0	45.2		mg/Kg		90	60 - 135		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Di-n-octyl phthalate (Surr)	*87*		*62 - 134*

Lab Sample ID: 885-7159-12 MS
Matrix: Solid
Analysis Batch: 7757

Client Sample ID: BH24-06 2.0'
Prep Type: Total/NA
Prep Batch: 7742

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics [C10-C28]	ND		48.0	45.1		mg/Kg		94	44 - 136		

Surrogate	MS %Recovery	MS Qualifier	Limits
Di-n-octyl phthalate (Surr)	*89*		*62 - 134*

Lab Sample ID: 885-7159-12 MSD
Matrix: Solid
Analysis Batch: 7757

Client Sample ID: BH24-06 2.0'
Prep Type: Total/NA
Prep Batch: 7742

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		48.7	44.3		mg/Kg		91	44 - 136	2	32

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Di-n-octyl phthalate (Surr)	*89*		*62 - 134*

QC Sample Results

Client: Vertex
Project/Site: JRU D1 1ACTB

Job ID: 885-7159-1

Method: 8015M/D - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: MB 885-7860/1-A
Matrix: Solid
Analysis Batch: 7876

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 7860

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10		mg/Kg		07/03/24 09:46	07/03/24 12:35	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		07/03/24 09:46	07/03/24 12:35	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*83*		*62 - 134*	*07/03/24 09:46*	*07/03/24 12:35*	*1*

Lab Sample ID: LCS 885-7860/2-A
Matrix: Solid
Analysis Batch: 7876

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 7860

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics [C10-C28]			50.0	49.3		mg/Kg		99	60 - 135		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Di-n-octyl phthalate (Surr)	*89*		*62 - 134*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 885-7780/1-A
Matrix: Solid
Analysis Batch: 7804

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 7780

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0		mg/Kg		07/02/24 12:18	07/02/24 13:54	1

Lab Sample ID: LCS 885-7780/2-A
Matrix: Solid
Analysis Batch: 7804

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 7780

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			30.0	28.2		mg/Kg		94	90 - 110		

Lab Sample ID: MB 885-7880/1-A
Matrix: Solid
Analysis Batch: 7895

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 7880

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0		mg/Kg		07/03/24 12:45	07/03/24 16:33	1

Lab Sample ID: LCS 885-7880/2-A
Matrix: Solid
Analysis Batch: 7895

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 7880

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			30.0	27.8		mg/Kg		93	90 - 110		

QC Association Summary

Client: Vertex
Project/Site: JRU D1 1ACTB

Job ID: 885-7159-1

GC VOA

Prep Batch: 7717

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7159-1	BH24-01 0.0'	Total/NA	Solid	5030C	
885-7159-2	BH24-01 2.0'	Total/NA	Solid	5030C	
885-7159-3	BH24-02 0.0'	Total/NA	Solid	5030C	
885-7159-4	BH24-02 2.0'	Total/NA	Solid	5030C	
885-7159-5	BH24-03 0.0'	Total/NA	Solid	5030C	
885-7159-6	BH24-03 2.0'	Total/NA	Solid	5030C	
885-7159-7	BH24-04 0.0'	Total/NA	Solid	5030C	
885-7159-8	BH24-04 2.0'	Total/NA	Solid	5030C	
885-7159-9	BH24-05 0.0'	Total/NA	Solid	5030C	
885-7159-10	BH24-05 2.0'	Total/NA	Solid	5030C	
885-7159-11	BH24-06 0.0'	Total/NA	Solid	5030C	
885-7159-12	BH24-06 2.0'	Total/NA	Solid	5030C	
MB 885-7717/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 885-7717/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCS 885-7717/3-A	Lab Control Sample	Total/NA	Solid	5030C	

Prep Batch: 7806

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7159-13	BH24-07 0.0'	Total/NA	Solid	5030C	
885-7159-14	BH24-07 2.0'	Total/NA	Solid	5030C	
885-7159-15	BH24-08 0.0'	Total/NA	Solid	5030C	
885-7159-16	BH24-08 2.0'	Total/NA	Solid	5030C	
MB 885-7806/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 885-7806/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCS 885-7806/3-A	Lab Control Sample	Total/NA	Solid	5030C	
885-7159-13 MS	BH24-07 0.0'	Total/NA	Solid	5030C	
885-7159-13 MSD	BH24-07 0.0'	Total/NA	Solid	5030C	
885-7159-14 MS	BH24-07 2.0'	Total/NA	Solid	5030C	
885-7159-14 MSD	BH24-07 2.0'	Total/NA	Solid	5030C	

Analysis Batch: 7830

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7159-1	BH24-01 0.0'	Total/NA	Solid	8015M/D	7717
885-7159-2	BH24-01 2.0'	Total/NA	Solid	8015M/D	7717
885-7159-3	BH24-02 0.0'	Total/NA	Solid	8015M/D	7717
885-7159-4	BH24-02 2.0'	Total/NA	Solid	8015M/D	7717
885-7159-5	BH24-03 0.0'	Total/NA	Solid	8015M/D	7717
885-7159-6	BH24-03 2.0'	Total/NA	Solid	8015M/D	7717
885-7159-7	BH24-04 0.0'	Total/NA	Solid	8015M/D	7717
885-7159-8	BH24-04 2.0'	Total/NA	Solid	8015M/D	7717
885-7159-9	BH24-05 0.0'	Total/NA	Solid	8015M/D	7717
885-7159-10	BH24-05 2.0'	Total/NA	Solid	8015M/D	7717
885-7159-11	BH24-06 0.0'	Total/NA	Solid	8015M/D	7717
885-7159-12	BH24-06 2.0'	Total/NA	Solid	8015M/D	7717
MB 885-7717/1-A	Method Blank	Total/NA	Solid	8015M/D	7717
LCS 885-7717/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	7717

Analysis Batch: 7831

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7159-1	BH24-01 0.0'	Total/NA	Solid	8021B	7717
885-7159-2	BH24-01 2.0'	Total/NA	Solid	8021B	7717

QC Association Summary

Client: Vertex
Project/Site: JRU D1 1ACTB

Job ID: 885-7159-1

GC VOA (Continued)

Analysis Batch: 7831 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7159-3	BH24-02 0.0'	Total/NA	Solid	8021B	7717
885-7159-4	BH24-02 2.0'	Total/NA	Solid	8021B	7717
885-7159-5	BH24-03 0.0'	Total/NA	Solid	8021B	7717
885-7159-6	BH24-03 2.0'	Total/NA	Solid	8021B	7717
885-7159-7	BH24-04 0.0'	Total/NA	Solid	8021B	7717
885-7159-8	BH24-04 2.0'	Total/NA	Solid	8021B	7717
885-7159-9	BH24-05 0.0'	Total/NA	Solid	8021B	7717
885-7159-10	BH24-05 2.0'	Total/NA	Solid	8021B	7717
885-7159-11	BH24-06 0.0'	Total/NA	Solid	8021B	7717
885-7159-12	BH24-06 2.0'	Total/NA	Solid	8021B	7717
MB 885-7717/1-A	Method Blank	Total/NA	Solid	8021B	7717
LCS 885-7717/3-A	Lab Control Sample	Total/NA	Solid	8021B	7717

Analysis Batch: 7936

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7159-13	BH24-07 0.0'	Total/NA	Solid	8015M/D	7806
885-7159-14	BH24-07 2.0'	Total/NA	Solid	8015M/D	7806
885-7159-15	BH24-08 0.0'	Total/NA	Solid	8015M/D	7806
885-7159-16	BH24-08 2.0'	Total/NA	Solid	8015M/D	7806
MB 885-7806/1-A	Method Blank	Total/NA	Solid	8015M/D	7806
LCS 885-7806/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	7806
885-7159-13 MS	BH24-07 0.0'	Total/NA	Solid	8015M/D	7806
885-7159-13 MSD	BH24-07 0.0'	Total/NA	Solid	8015M/D	7806

Analysis Batch: 7937

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7159-13	BH24-07 0.0'	Total/NA	Solid	8021B	7806
885-7159-14	BH24-07 2.0'	Total/NA	Solid	8021B	7806
885-7159-15	BH24-08 0.0'	Total/NA	Solid	8021B	7806
885-7159-16	BH24-08 2.0'	Total/NA	Solid	8021B	7806
MB 885-7806/1-A	Method Blank	Total/NA	Solid	8021B	7806
LCS 885-7806/3-A	Lab Control Sample	Total/NA	Solid	8021B	7806
885-7159-14 MS	BH24-07 2.0'	Total/NA	Solid	8021B	7806
885-7159-14 MSD	BH24-07 2.0'	Total/NA	Solid	8021B	7806

GC Semi VOA

Prep Batch: 7742

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7159-1	BH24-01 0.0'	Total/NA	Solid	SHAKE	
885-7159-2	BH24-01 2.0'	Total/NA	Solid	SHAKE	
885-7159-3	BH24-02 0.0'	Total/NA	Solid	SHAKE	
885-7159-4	BH24-02 2.0'	Total/NA	Solid	SHAKE	
885-7159-5	BH24-03 0.0'	Total/NA	Solid	SHAKE	
885-7159-6	BH24-03 2.0'	Total/NA	Solid	SHAKE	
885-7159-7	BH24-04 0.0'	Total/NA	Solid	SHAKE	
885-7159-8	BH24-04 2.0'	Total/NA	Solid	SHAKE	
885-7159-9	BH24-05 0.0'	Total/NA	Solid	SHAKE	
885-7159-10	BH24-05 2.0'	Total/NA	Solid	SHAKE	
885-7159-11	BH24-06 0.0'	Total/NA	Solid	SHAKE	
885-7159-12	BH24-06 2.0'	Total/NA	Solid	SHAKE	

QC Association Summary

Client: Vertex
Project/Site: JRU D1 1ACTB

Job ID: 885-7159-1

GC Semi VOA (Continued)

Prep Batch: 7742 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 885-7742/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-7742/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	
885-7159-12 MS	BH24-06 2.0'	Total/NA	Solid	SHAKE	
885-7159-12 MSD	BH24-06 2.0'	Total/NA	Solid	SHAKE	

Analysis Batch: 7757

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7159-1	BH24-01 0.0'	Total/NA	Solid	8015M/D	7742
885-7159-2	BH24-01 2.0'	Total/NA	Solid	8015M/D	7742
885-7159-3	BH24-02 0.0'	Total/NA	Solid	8015M/D	7742
885-7159-4	BH24-02 2.0'	Total/NA	Solid	8015M/D	7742
885-7159-5	BH24-03 0.0'	Total/NA	Solid	8015M/D	7742
885-7159-6	BH24-03 2.0'	Total/NA	Solid	8015M/D	7742
885-7159-7	BH24-04 0.0'	Total/NA	Solid	8015M/D	7742
885-7159-8	BH24-04 2.0'	Total/NA	Solid	8015M/D	7742
885-7159-9	BH24-05 0.0'	Total/NA	Solid	8015M/D	7742
885-7159-10	BH24-05 2.0'	Total/NA	Solid	8015M/D	7742
885-7159-11	BH24-06 0.0'	Total/NA	Solid	8015M/D	7742
885-7159-12	BH24-06 2.0'	Total/NA	Solid	8015M/D	7742
MB 885-7742/1-A	Method Blank	Total/NA	Solid	8015M/D	7742
LCS 885-7742/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	7742
885-7159-12 MS	BH24-06 2.0'	Total/NA	Solid	8015M/D	7742
885-7159-12 MSD	BH24-06 2.0'	Total/NA	Solid	8015M/D	7742

Prep Batch: 7860

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7159-13	BH24-07 0.0'	Total/NA	Solid	SHAKE	
885-7159-14	BH24-07 2.0'	Total/NA	Solid	SHAKE	
885-7159-15	BH24-08 0.0'	Total/NA	Solid	SHAKE	
885-7159-16	BH24-08 2.0'	Total/NA	Solid	SHAKE	
MB 885-7860/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-7860/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	

Analysis Batch: 7876

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7159-13	BH24-07 0.0'	Total/NA	Solid	8015M/D	7860
885-7159-14	BH24-07 2.0'	Total/NA	Solid	8015M/D	7860
885-7159-15	BH24-08 0.0'	Total/NA	Solid	8015M/D	7860
885-7159-16	BH24-08 2.0'	Total/NA	Solid	8015M/D	7860
MB 885-7860/1-A	Method Blank	Total/NA	Solid	8015M/D	7860
LCS 885-7860/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	7860

HPLC/IC

Prep Batch: 7780

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7159-1	BH24-01 0.0'	Total/NA	Solid	300_Prep	
885-7159-2	BH24-01 2.0'	Total/NA	Solid	300_Prep	
885-7159-3	BH24-02 0.0'	Total/NA	Solid	300_Prep	
885-7159-4	BH24-02 2.0'	Total/NA	Solid	300_Prep	
885-7159-5	BH24-03 0.0'	Total/NA	Solid	300_Prep	

QC Association Summary

Client: Vertex
Project/Site: JRU D1 1ACTB

Job ID: 885-7159-1

HPLC/IC (Continued)

Prep Batch: 7780 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7159-6	BH24-03 2.0'	Total/NA	Solid	300_Prep	
885-7159-7	BH24-04 0.0'	Total/NA	Solid	300_Prep	
885-7159-8	BH24-04 2.0'	Total/NA	Solid	300_Prep	
885-7159-9	BH24-05 0.0'	Total/NA	Solid	300_Prep	
885-7159-10	BH24-05 2.0'	Total/NA	Solid	300_Prep	
885-7159-11	BH24-06 0.0'	Total/NA	Solid	300_Prep	
885-7159-12	BH24-06 2.0'	Total/NA	Solid	300_Prep	
MB 885-7780/1-A	Method Blank	Total/NA	Solid	300_Prep	
LCS 885-7780/2-A	Lab Control Sample	Total/NA	Solid	300_Prep	

Analysis Batch: 7804

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7159-2	BH24-01 2.0'	Total/NA	Solid	300.0	7780
885-7159-9	BH24-05 0.0'	Total/NA	Solid	300.0	7780
885-7159-10	BH24-05 2.0'	Total/NA	Solid	300.0	7780
885-7159-12	BH24-06 2.0'	Total/NA	Solid	300.0	7780
MB 885-7780/1-A	Method Blank	Total/NA	Solid	300.0	7780
LCS 885-7780/2-A	Lab Control Sample	Total/NA	Solid	300.0	7780

Prep Batch: 7880

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7159-13	BH24-07 0.0'	Total/NA	Solid	300_Prep	
885-7159-14	BH24-07 2.0'	Total/NA	Solid	300_Prep	
885-7159-15	BH24-08 0.0'	Total/NA	Solid	300_Prep	
885-7159-16	BH24-08 2.0'	Total/NA	Solid	300_Prep	
MB 885-7880/1-A	Method Blank	Total/NA	Solid	300_Prep	
LCS 885-7880/2-A	Lab Control Sample	Total/NA	Solid	300_Prep	

Analysis Batch: 7895

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7159-1	BH24-01 0.0'	Total/NA	Solid	300.0	7780
885-7159-3	BH24-02 0.0'	Total/NA	Solid	300.0	7780
885-7159-4	BH24-02 2.0'	Total/NA	Solid	300.0	7780
885-7159-5	BH24-03 0.0'	Total/NA	Solid	300.0	7780
885-7159-6	BH24-03 2.0'	Total/NA	Solid	300.0	7780
885-7159-7	BH24-04 0.0'	Total/NA	Solid	300.0	7780
885-7159-8	BH24-04 2.0'	Total/NA	Solid	300.0	7780
885-7159-11	BH24-06 0.0'	Total/NA	Solid	300.0	7780
885-7159-14	BH24-07 2.0'	Total/NA	Solid	300.0	7880
885-7159-15	BH24-08 0.0'	Total/NA	Solid	300.0	7880
MB 885-7880/1-A	Method Blank	Total/NA	Solid	300.0	7880
LCS 885-7880/2-A	Lab Control Sample	Total/NA	Solid	300.0	7880

Analysis Batch: 8024

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7159-13	BH24-07 0.0'	Total/NA	Solid	300.0	7880
885-7159-16	BH24-08 2.0'	Total/NA	Solid	300.0	7880

Lab Chronicle

Client: Vertex
Project/Site: JRU D1 1ACTB

Job ID: 885-7159-1

Client Sample ID: BH24-01 0.0'

Lab Sample ID: 885-7159-1
Matrix: Solid
Date Collected: 06/27/24 08:55
Date Received: 06/29/24 06:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7717	AT	EET ALB	07/01/24 14:00
Total/NA	Analysis	8015M/D		1	7830	JP	EET ALB	07/03/24 03:30
Total/NA	Prep	5030C			7717	AT	EET ALB	07/01/24 14:00
Total/NA	Analysis	8021B		1	7831	JP	EET ALB	07/03/24 03:30
Total/NA	Prep	SHAKE			7742	KR	EET ALB	07/02/24 08:13
Total/NA	Analysis	8015M/D		1	7757	PD	EET ALB	07/02/24 13:35
Total/NA	Prep	300_Prep			7780	RC	EET ALB	07/02/24 12:18
Total/NA	Analysis	300.0		50	7895	MA	EET ALB	07/03/24 22:44

Client Sample ID: BH24-01 2.0'

Lab Sample ID: 885-7159-2
Matrix: Solid
Date Collected: 06/27/24 09:00
Date Received: 06/29/24 06:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7717	AT	EET ALB	07/01/24 14:00
Total/NA	Analysis	8015M/D		1	7830	JP	EET ALB	07/03/24 03:53
Total/NA	Prep	5030C			7717	AT	EET ALB	07/01/24 14:00
Total/NA	Analysis	8021B		1	7831	JP	EET ALB	07/03/24 03:53
Total/NA	Prep	SHAKE			7742	KR	EET ALB	07/02/24 08:13
Total/NA	Analysis	8015M/D		1	7757	PD	EET ALB	07/02/24 13:46
Total/NA	Prep	300_Prep			7780	RC	EET ALB	07/02/24 12:18
Total/NA	Analysis	300.0		20	7804	RC	EET ALB	07/02/24 15:11

Client Sample ID: BH24-02 0.0'

Lab Sample ID: 885-7159-3
Matrix: Solid
Date Collected: 06/27/24 09:05
Date Received: 06/29/24 06:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7717	AT	EET ALB	07/01/24 14:00
Total/NA	Analysis	8015M/D		1	7830	JP	EET ALB	07/03/24 04:17
Total/NA	Prep	5030C			7717	AT	EET ALB	07/01/24 14:00
Total/NA	Analysis	8021B		1	7831	JP	EET ALB	07/03/24 04:17
Total/NA	Prep	SHAKE			7742	KR	EET ALB	07/02/24 08:13
Total/NA	Analysis	8015M/D		1	7757	PD	EET ALB	07/02/24 13:57
Total/NA	Prep	300_Prep			7780	RC	EET ALB	07/02/24 12:18
Total/NA	Analysis	300.0		200	7895	MA	EET ALB	07/03/24 23:33

Client Sample ID: BH24-02 2.0'

Lab Sample ID: 885-7159-4
Matrix: Solid
Date Collected: 06/27/24 09:10
Date Received: 06/29/24 06:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7717	AT	EET ALB	07/01/24 14:00
Total/NA	Analysis	8015M/D		1	7830	JP	EET ALB	07/03/24 04:40

Lab Chronicle

Client: Vertex
Project/Site: JRU D1 1ACTB

Job ID: 885-7159-1

Client Sample ID: BH24-02 2.0'

Lab Sample ID: 885-7159-4
Matrix: Solid
Date Collected: 06/27/24 09:10
Date Received: 06/29/24 06:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7717	AT	EET ALB	07/01/24 14:00
Total/NA	Analysis	8021B		1	7831	JP	EET ALB	07/03/24 04:40
Total/NA	Prep	SHAKE			7742	KR	EET ALB	07/02/24 08:13
Total/NA	Analysis	8015M/D		1	7757	PD	EET ALB	07/02/24 14:08
Total/NA	Prep	300_Prep			7780	RC	EET ALB	07/02/24 12:18
Total/NA	Analysis	300.0		100	7895	MA	EET ALB	07/04/24 00:23

Client Sample ID: BH24-03 0.0'

Lab Sample ID: 885-7159-5
Matrix: Solid
Date Collected: 06/27/24 09:20
Date Received: 06/29/24 06:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7717	AT	EET ALB	07/01/24 14:00
Total/NA	Analysis	8015M/D		1	7830	JP	EET ALB	07/03/24 05:03
Total/NA	Prep	5030C			7717	AT	EET ALB	07/01/24 14:00
Total/NA	Analysis	8021B		1	7831	JP	EET ALB	07/03/24 05:03
Total/NA	Prep	SHAKE			7742	KR	EET ALB	07/02/24 08:13
Total/NA	Analysis	8015M/D		1	7757	PD	EET ALB	07/02/24 14:19
Total/NA	Prep	300_Prep			7780	RC	EET ALB	07/02/24 12:18
Total/NA	Analysis	300.0		200	7895	MA	EET ALB	07/03/24 23:46

Client Sample ID: BH24-03 2.0'

Lab Sample ID: 885-7159-6
Matrix: Solid
Date Collected: 06/27/24 09:25
Date Received: 06/29/24 06:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7717	AT	EET ALB	07/01/24 14:00
Total/NA	Analysis	8015M/D		1	7830	JP	EET ALB	07/03/24 05:27
Total/NA	Prep	5030C			7717	AT	EET ALB	07/01/24 14:00
Total/NA	Analysis	8021B		1	7831	JP	EET ALB	07/03/24 05:27
Total/NA	Prep	SHAKE			7742	KR	EET ALB	07/02/24 08:13
Total/NA	Analysis	8015M/D		1	7757	PD	EET ALB	07/02/24 14:30
Total/NA	Prep	300_Prep			7780	RC	EET ALB	07/02/24 12:18
Total/NA	Analysis	300.0		50	7895	MA	EET ALB	07/03/24 22:56

Client Sample ID: BH24-04 0.0'

Lab Sample ID: 885-7159-7
Matrix: Solid
Date Collected: 06/27/24 09:30
Date Received: 06/29/24 06:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7717	AT	EET ALB	07/01/24 14:00
Total/NA	Analysis	8015M/D		1	7830	JP	EET ALB	07/03/24 05:50
Total/NA	Prep	5030C			7717	AT	EET ALB	07/01/24 14:00
Total/NA	Analysis	8021B		1	7831	JP	EET ALB	07/03/24 05:50

Lab Chronicle

Client: Vertex
Project/Site: JRU D1 1ACTB

Job ID: 885-7159-1

Client Sample ID: BH24-04 0.0'

Lab Sample ID: 885-7159-7
Matrix: Solid
Date Collected: 06/27/24 09:30
Date Received: 06/29/24 06:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	SHAKE			7742	KR	EET ALB	07/02/24 08:13
Total/NA	Analysis	8015M/D		1	7757	PD	EET ALB	07/02/24 14:41
Total/NA	Prep	300_Prep			7780	RC	EET ALB	07/02/24 12:18
Total/NA	Analysis	300.0		200	7895	MA	EET ALB	07/03/24 23:58

Client Sample ID: BH24-04 2.0'

Lab Sample ID: 885-7159-8
Matrix: Solid
Date Collected: 06/27/24 09:35
Date Received: 06/29/24 06:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7717	AT	EET ALB	07/01/24 14:00
Total/NA	Analysis	8015M/D		1	7830	JP	EET ALB	07/03/24 06:14
Total/NA	Prep	5030C			7717	AT	EET ALB	07/01/24 14:00
Total/NA	Analysis	8021B		1	7831	JP	EET ALB	07/03/24 06:14
Total/NA	Prep	SHAKE			7742	KR	EET ALB	07/02/24 08:13
Total/NA	Analysis	8015M/D		1	7757	PD	EET ALB	07/02/24 14:52
Total/NA	Prep	300_Prep			7780	RC	EET ALB	07/02/24 12:18
Total/NA	Analysis	300.0		100	7895	MA	EET ALB	07/04/24 00:35

Client Sample ID: BH24-05 0.0'

Lab Sample ID: 885-7159-9
Matrix: Solid
Date Collected: 06/27/24 10:00
Date Received: 06/29/24 06:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7717	AT	EET ALB	07/01/24 14:00
Total/NA	Analysis	8015M/D		1	7830	JP	EET ALB	07/03/24 06:37
Total/NA	Prep	5030C			7717	AT	EET ALB	07/01/24 14:00
Total/NA	Analysis	8021B		1	7831	JP	EET ALB	07/03/24 06:37
Total/NA	Prep	SHAKE			7742	KR	EET ALB	07/02/24 08:13
Total/NA	Analysis	8015M/D		1	7757	PD	EET ALB	07/02/24 15:03
Total/NA	Prep	300_Prep			7780	RC	EET ALB	07/02/24 12:18
Total/NA	Analysis	300.0		20	7804	RC	EET ALB	07/02/24 17:33

Client Sample ID: BH24-05 2.0'

Lab Sample ID: 885-7159-10
Matrix: Solid
Date Collected: 06/27/24 10:05
Date Received: 06/29/24 06:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7717	AT	EET ALB	07/01/24 14:00
Total/NA	Analysis	8015M/D		1	7830	JP	EET ALB	07/03/24 07:24
Total/NA	Prep	5030C			7717	AT	EET ALB	07/01/24 14:00
Total/NA	Analysis	8021B		1	7831	JP	EET ALB	07/03/24 07:24
Total/NA	Prep	SHAKE			7742	KR	EET ALB	07/02/24 08:13
Total/NA	Analysis	8015M/D		1	7757	PD	EET ALB	07/02/24 15:14

Lab Chronicle

Client: Vertex
Job ID: 885-7159-1
Project/Site: JRU D1 1ACTB

Client Sample ID: BH24-05 2.0'
Lab Sample ID: 885-7159-10
Date Collected: 06/27/24 10:05
Matrix: Solid
Date Received: 06/29/24 06:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	300_Prep			7780	RC	EET ALB	07/02/24 12:18
Total/NA	Analysis	300.0		20	7804	RC	EET ALB	07/02/24 17:45

Client Sample ID: BH24-06 0.0'
Lab Sample ID: 885-7159-11
Date Collected: 06/27/24 10:10
Matrix: Solid
Date Received: 06/29/24 06:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7717	AT	EET ALB	07/01/24 14:00
Total/NA	Analysis	8015M/D		1	7830	JP	EET ALB	07/03/24 07:47
Total/NA	Prep	5030C			7717	AT	EET ALB	07/01/24 14:00
Total/NA	Analysis	8021B		1	7831	JP	EET ALB	07/03/24 07:47
Total/NA	Prep	SHAKE			7742	KR	EET ALB	07/02/24 08:13
Total/NA	Analysis	8015M/D		1	7757	PD	EET ALB	07/02/24 15:25
Total/NA	Prep	300_Prep			7780	RC	EET ALB	07/02/24 12:18
Total/NA	Analysis	300.0		200	7895	MA	EET ALB	07/04/24 00:10

Client Sample ID: BH24-06 2.0'
Lab Sample ID: 885-7159-12
Date Collected: 06/27/24 10:15
Matrix: Solid
Date Received: 06/29/24 06:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7717	AT	EET ALB	07/01/24 14:00
Total/NA	Analysis	8015M/D		1	7830	JP	EET ALB	07/03/24 08:11
Total/NA	Prep	5030C			7717	AT	EET ALB	07/01/24 14:00
Total/NA	Analysis	8021B		1	7831	JP	EET ALB	07/03/24 08:11
Total/NA	Prep	SHAKE			7742	KR	EET ALB	07/02/24 08:13
Total/NA	Analysis	8015M/D		1	7757	PD	EET ALB	07/02/24 15:38
Total/NA	Prep	300_Prep			7780	RC	EET ALB	07/02/24 12:18
Total/NA	Analysis	300.0		20	7804	RC	EET ALB	07/02/24 18:11

Client Sample ID: BH24-07 0.0'
Lab Sample ID: 885-7159-13
Date Collected: 06/27/24 10:20
Matrix: Solid
Date Received: 06/29/24 06:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7806	AT	EET ALB	07/02/24 13:17
Total/NA	Analysis	8015M/D		1	7936	AT	EET ALB	07/03/24 11:52
Total/NA	Prep	5030C			7806	AT	EET ALB	07/02/24 13:17
Total/NA	Analysis	8021B		1	7937	AT	EET ALB	07/03/24 11:52
Total/NA	Prep	SHAKE			7860	KR	EET ALB	07/03/24 09:46
Total/NA	Analysis	8015M/D		1	7876	PD	EET ALB	07/03/24 12:56
Total/NA	Prep	300_Prep			7880	RC	EET ALB	07/03/24 12:45
Total/NA	Analysis	300.0		50	8024	JT	EET ALB	07/05/24 15:25

Lab Chronicle

Client: Vertex
Job ID: 885-7159-1
Project/Site: JRU D1 1ACTB

Client Sample ID: BH24-07 2.0'
Lab Sample ID: 885-7159-14
Date Collected: 06/27/24 10:30
Matrix: Solid
Date Received: 06/29/24 06:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7806	AT	EET ALB	07/02/24 13:17
Total/NA	Analysis	8015M/D		1	7936	AT	EET ALB	07/03/24 12:58
Total/NA	Prep	5030C			7806	AT	EET ALB	07/02/24 13:17
Total/NA	Analysis	8021B		1	7937	AT	EET ALB	07/03/24 12:58
Total/NA	Prep	SHAKE			7860	KR	EET ALB	07/03/24 09:46
Total/NA	Analysis	8015M/D		1	7876	PD	EET ALB	07/03/24 13:07
Total/NA	Prep	300_Prep			7880	RC	EET ALB	07/03/24 12:45
Total/NA	Analysis	300.0		20	7895	MA	EET ALB	07/03/24 17:35

Client Sample ID: BH24-08 0.0'
Lab Sample ID: 885-7159-15
Date Collected: 06/27/24 13:00
Matrix: Solid
Date Received: 06/29/24 06:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7806	AT	EET ALB	07/02/24 13:17
Total/NA	Analysis	8015M/D		1	7936	AT	EET ALB	07/03/24 14:03
Total/NA	Prep	5030C			7806	AT	EET ALB	07/02/24 13:17
Total/NA	Analysis	8021B		1	7937	AT	EET ALB	07/03/24 14:03
Total/NA	Prep	SHAKE			7860	KR	EET ALB	07/03/24 09:46
Total/NA	Analysis	8015M/D		1	7876	PD	EET ALB	07/03/24 13:18
Total/NA	Prep	300_Prep			7880	RC	EET ALB	07/03/24 12:45
Total/NA	Analysis	300.0		20	7895	MA	EET ALB	07/03/24 17:47

Client Sample ID: BH24-08 2.0'
Lab Sample ID: 885-7159-16
Date Collected: 06/27/24 13:05
Matrix: Solid
Date Received: 06/29/24 06:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7806	AT	EET ALB	07/02/24 13:17
Total/NA	Analysis	8015M/D		1	7936	AT	EET ALB	07/03/24 14:25
Total/NA	Prep	5030C			7806	AT	EET ALB	07/02/24 13:17
Total/NA	Analysis	8021B		1	7937	AT	EET ALB	07/03/24 14:25
Total/NA	Prep	SHAKE			7860	KR	EET ALB	07/03/24 09:46
Total/NA	Analysis	8015M/D		1	7876	PD	EET ALB	07/03/24 13:28
Total/NA	Prep	300_Prep			7880	RC	EET ALB	07/03/24 12:45
Total/NA	Analysis	300.0		50	8024	JT	EET ALB	07/05/24 15:37

Laboratory References:

EET ALB = Eurofins Albuquerque, 4901 Hawkins NE, Albuquerque, NM 87109, TEL (505)345-3975

Accreditation/Certification Summary

Client: Vertex
Job ID: 885-7159-1
Project/Site: JRU D1 1ACTB

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 Energy)

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:
☐ Standard ☒ Rush 5-day

Project Name: JRU 01 1ACTB

Project #: 23E-04616

Project Manager: Sally Carttar

Sampler: AL

On Ice: ☑ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 2.0 ±0=2.0 (°C)

HALL ENVIRONMENTAL ANALYSIS LABOR
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 8710
Tel. 505-345-3975 Fax 505-345-4107

885-7159 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	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
6/27/24	0855	Soil	BH24-01 0.0'	4oz	ICE	1										
	0900		BH24-01 2.0'			2										
	0905		BH24-02 0.0'			3										
	0910		BH24-02 2.0'			4										
	0920		BH24-03 0.0'			5										
	0925		BH24-03 2.0'			6										
	0930		BH24-04 0.0'			7										
	0935		BH24-04 2.0'			8										
	1006		BH24-05 0.0'			9										
	1005		BH24-05 2.0'			10										
	1010		BH24-06 0.0'			11										
	1015		BH24-06 2.0'			12										

Date	Time	Relinquished by	Received by	Via	Date	Time
					6/28/24	845
6/28/24	1900			courier	6/29/24	6:15

Remarks: Bill Direct to XTO Energy
nAPP2411739118
cost center # 1082151001
cc: scarttar@vertex.ca
ALvduvik@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.

Chain-of-Custody Record

Client: Vertex (XTO Energy)

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:
☐ Standard ☒ Rush 5-day

Project Name: JRU D1 1A CTB

Project #: 23E-04616

Project Manager: Sally Carttar

Sampler: AL

On Ice: ☑ Yes ☐ No

# of Coolers: 1

Cooler Temp (Including CF): 2.0 ± 0 = 2.0 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

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)
6/27/24	1020	Soil	BH24-07 0.0'	4oz	ICE	13	✓	✓					✓			
	1030		BH24-07 2.0'			14										
	1300		BH24-08 0.0'			15										
	1305		BH24-08 2.0			16										

Date	Time:	Relinquished by	Received by	Via	Date	Time
					6/28/24	945
Date	Time	Relinquished by	Received by	Via	Date	Time
6/28/24	1900					

Remarks: Bill Direct to XTO Energy
nAPP2411739118
cost center # 1082151001
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: 885-7159-1

Login Number: 7159 **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").	True	

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Ms. Sally Carttar
Vertex
3101 Boyd Dr
Carlsbad, New Mexico 88220

Generated 7/26/2024 9:38:55 AM

JOB DESCRIPTION

JRU D1 1A CTB

JOB NUMBER

885-7239-1

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
7/26/2024 9:38:55 AM

Authorized for release by
Cheyenne Cason, Project Manager
cheyenne.cason@et.eurofinsus.com
(505)345-3975

Client: Vertex
Project/Site: JRU D1 1A CTB

Laboratory Job ID: 885-7239-1

Table of Contents

Definitions/Glossary

Client: Vertex Job ID: 885-7239-1
Project/Site: JRU D1 1A CTB

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 D1 1A CTB

Job ID: 885-7239-1

Job ID: 885-7239-1 Eurofins Albuquerque

Job Narrative
885-7239-1

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 and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided 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 7/2/2024 8:03 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 0.6°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
Method 8015D_DRO: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 885-8353 and analytical batch 885-8410 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.

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 1A CTB

Job ID: 885-7239-1

Client Sample ID: BH24-09 0.0'

Date Collected: 06/28/24 08:35
Date Received: 07/02/24 08:03

Lab Sample ID: 885-7239-1

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		07/02/24 13:17	07/03/24 16:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*35 - 166*	*07/02/24 13:17*	*07/03/24 16:15*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		07/02/24 13:17	07/03/24 16:15	1
Ethylbenzene	ND		0.048		mg/Kg		07/02/24 13:17	07/03/24 16:15	1
Toluene	ND		0.048		mg/Kg		07/02/24 13:17	07/03/24 16:15	1
Xylenes, Total	ND		0.097		mg/Kg		07/02/24 13:17	07/03/24 16:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*48 - 145*	*07/02/24 13:17*	*07/03/24 16:15*	*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		9.3		mg/Kg		07/03/24 09:46	07/03/24 14:33	1
Motor Oil Range Organics [C28-C40]	ND		47		mg/Kg		07/03/24 09:46	07/03/24 14:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*88*		*62 - 134*	*07/03/24 09:46*	*07/03/24 14:33*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**8800**		300		mg/Kg		07/03/24 12:45	07/05/24 15:49	100

Client Sample Results

Client: Vertex
Project/Site: JRU D1 1A CTB

Job ID: 885-7239-1

Client Sample ID: BH24-09 2.0'

Date Collected: 06/28/24 08:40
Date Received: 07/02/24 08:03

Lab Sample ID: 885-7239-2

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		4.8		mg/Kg		07/02/24 13:17	07/03/24 16:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*35 - 166*	*07/02/24 13:17*	*07/03/24 16:37*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		07/02/24 13:17	07/03/24 16:37	1
Ethylbenzene	ND		0.048		mg/Kg		07/02/24 13:17	07/03/24 16:37	1
Toluene	ND		0.048		mg/Kg		07/02/24 13:17	07/03/24 16:37	1
Xylenes, Total	ND		0.097		mg/Kg		07/02/24 13:17	07/03/24 16:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*48 - 145*	*07/02/24 13:17*	*07/03/24 16:37*	*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		9.8		mg/Kg		07/03/24 09:46	07/03/24 14:44	1
Motor Oil Range Organics [C28-C40]	ND		49		mg/Kg		07/03/24 09:46	07/03/24 14:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*83*		*62 - 134*	*07/03/24 09:46*	*07/03/24 14:44*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3300**		150		mg/Kg		07/03/24 12:45	07/05/24 16:02	50

Client Sample Results

Client: Vertex
Project/Site: JRU D1 1A CTB

Job ID: 885-7239-1

Client Sample ID: BH24-10 0.0'

Date Collected: 06/28/24 08:45
Date Received: 07/02/24 08:03

Lab Sample ID: 885-7239-3

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		07/02/24 13:17	07/03/24 17:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*35 - 166*	*07/02/24 13:17*	*07/03/24 17:21*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		07/02/24 13:17	07/03/24 17:21	1
Ethylbenzene	ND		0.048		mg/Kg		07/02/24 13:17	07/03/24 17:21	1
Toluene	ND		0.048		mg/Kg		07/02/24 13:17	07/03/24 17:21	1
Xylenes, Total	ND		0.095		mg/Kg		07/02/24 13:17	07/03/24 17:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*48 - 145*	*07/02/24 13:17*	*07/03/24 17:21*	*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		10		mg/Kg		07/03/24 09:46	07/03/24 14:55	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		07/03/24 09:46	07/03/24 14:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*94*		*62 - 134*	*07/03/24 09:46*	*07/03/24 14:55*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**7200**		300		mg/Kg		07/03/24 12:45	07/05/24 16:39	100

Client Sample Results

Client: Vertex
Project/Site: JRU D1 1A CTB

Job ID: 885-7239-1

Client Sample ID: BH24-10 2.0'

Date Collected: 06/28/24 08:50
Date Received: 07/02/24 08:03

Lab Sample ID: 885-7239-4

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		4.9		mg/Kg		07/02/24 13:17	07/03/24 17:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*35 - 166*	*07/02/24 13:17*	*07/03/24 17:43*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		07/02/24 13:17	07/03/24 17:43	1
Ethylbenzene	ND		0.049		mg/Kg		07/02/24 13:17	07/03/24 17:43	1
Toluene	ND		0.049		mg/Kg		07/02/24 13:17	07/03/24 17:43	1
Xylenes, Total	ND		0.098		mg/Kg		07/02/24 13:17	07/03/24 17:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*48 - 145*	*07/02/24 13:17*	*07/03/24 17:43*	*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		07/03/24 09:46	07/03/24 15:05	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		07/03/24 09:46	07/03/24 15:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*104*		*62 - 134*	*07/03/24 09:46*	*07/03/24 15:05*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4000**		150		mg/Kg		07/03/24 12:45	07/08/24 16:47	50

Client Sample Results

Client: Vertex
Project/Site: JRU D1 1A CTB

Job ID: 885-7239-1

Client Sample ID: BH24-11 0.0'

Date Collected: 06/28/24 09:00
Date Received: 07/02/24 08:03

Lab Sample ID: 885-7239-5

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		07/02/24 13:17	07/03/24 18:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*35 - 166*	*07/02/24 13:17*	*07/03/24 18:05*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		07/02/24 13:17	07/03/24 18:05	1
Ethylbenzene	ND		0.050		mg/Kg		07/02/24 13:17	07/03/24 18:05	1
Toluene	ND		0.050		mg/Kg		07/02/24 13:17	07/03/24 18:05	1
Xylenes, Total	ND		0.10		mg/Kg		07/02/24 13:17	07/03/24 18:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*48 - 145*	*07/02/24 13:17*	*07/03/24 18:05*	*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		9.0		mg/Kg		07/03/24 09:46	07/03/24 15:16	1
Motor Oil Range Organics [C28-C40]	ND		45		mg/Kg		07/03/24 09:46	07/03/24 15:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*83*		*62 - 134*	*07/03/24 09:46*	*07/03/24 15:16*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**340**		60		mg/Kg		07/03/24 12:45	07/03/24 21:05	20

Client Sample Results

Client: Vertex
Project/Site: JRU D1 1A CTB

Job ID: 885-7239-1

Client Sample ID: BH24-11 2.0'

Date Collected: 06/28/24 09:05
Date Received: 07/02/24 08:03

Lab Sample ID: 885-7239-6

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		4.9		mg/Kg		07/02/24 13:17	07/03/24 18:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*35 - 166*	*07/02/24 13:17*	*07/03/24 18:27*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		07/02/24 13:17	07/03/24 18:27	1
Ethylbenzene	ND		0.049		mg/Kg		07/02/24 13:17	07/03/24 18:27	1
Toluene	ND		0.049		mg/Kg		07/02/24 13:17	07/03/24 18:27	1
Xylenes, Total	ND		0.098		mg/Kg		07/02/24 13:17	07/03/24 18:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*48 - 145*	*07/02/24 13:17*	*07/03/24 18:27*	*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		9.8		mg/Kg		07/03/24 09:46	07/03/24 15:27	1
Motor Oil Range Organics [C28-C40]	ND		49		mg/Kg		07/03/24 09:46	07/03/24 15:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*87*		*62 - 134*	*07/03/24 09:46*	*07/03/24 15:27*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**150**		60		mg/Kg		07/03/24 12:45	07/03/24 21:17	20

Client Sample Results

Client: Vertex
Project/Site: JRU D1 1A CTB

Job ID: 885-7239-1

Client Sample ID: BH24-12 0.0'

Date Collected: 06/28/24 09:15
Date Received: 07/02/24 08:03

Lab Sample ID: 885-7239-7

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		4.9		mg/Kg		07/02/24 13:17	07/03/24 18:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*35 - 166*	*07/02/24 13:17*	*07/03/24 18:49*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		07/02/24 13:17	07/03/24 18:49	1
Ethylbenzene	ND		0.049		mg/Kg		07/02/24 13:17	07/03/24 18:49	1
Toluene	ND		0.049		mg/Kg		07/02/24 13:17	07/03/24 18:49	1
Xylenes, Total	ND		0.098		mg/Kg		07/02/24 13:17	07/03/24 18:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*48 - 145*	*07/02/24 13:17*	*07/03/24 18:49*	*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		9.2		mg/Kg		07/03/24 09:46	07/03/24 15:38	1
Motor Oil Range Organics [C28-C40]	ND		46		mg/Kg		07/03/24 09:46	07/03/24 15:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*85*		*62 - 134*	*07/03/24 09:46*	*07/03/24 15:38*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**150**		60		mg/Kg		07/03/24 12:45	07/03/24 21:30	20

Client Sample Results

Client: Vertex
Project/Site: JRU D1 1A CTB

Job ID: 885-7239-1

Client Sample ID: BH24-12 2.0'

Date Collected: 06/28/24 09:20
Date Received: 07/02/24 08:03

Lab Sample ID: 885-7239-8

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		4.9		mg/Kg		07/02/24 13:17	07/03/24 19:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*35 - 166*	*07/02/24 13:17*	*07/03/24 19:11*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		07/02/24 13:17	07/03/24 19:11	1
Ethylbenzene	ND		0.049		mg/Kg		07/02/24 13:17	07/03/24 19:11	1
Toluene	ND		0.049		mg/Kg		07/02/24 13:17	07/03/24 19:11	1
Xylenes, Total	ND		0.098		mg/Kg		07/02/24 13:17	07/03/24 19:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*48 - 145*	*07/02/24 13:17*	*07/03/24 19:11*	*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		07/03/24 09:46	07/03/24 15:49	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		07/03/24 09:46	07/03/24 15:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*91*		*62 - 134*	*07/03/24 09:46*	*07/03/24 15:49*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**120**		60		mg/Kg		07/03/24 12:45	07/03/24 21:42	20

Client Sample Results

Client: Vertex
Project/Site: JRU D1 1A CTB

Job ID: 885-7239-1

Client Sample ID: BH24-13 0.0'

Date Collected: 06/28/24 13:00
Date Received: 07/02/24 08:03

Lab Sample ID: 885-7239-9

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		07/02/24 13:17	07/03/24 19:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*35 - 166*	*07/02/24 13:17*	*07/03/24 19:33*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		07/02/24 13:17	07/03/24 19:33	1
Ethylbenzene	ND		0.048		mg/Kg		07/02/24 13:17	07/03/24 19:33	1
Toluene	ND		0.048		mg/Kg		07/02/24 13:17	07/03/24 19:33	1
Xylenes, Total	ND		0.097		mg/Kg		07/02/24 13:17	07/03/24 19:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*48 - 145*	*07/02/24 13:17*	*07/03/24 19:33*	*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]	**14**		9.8		mg/Kg		07/03/24 09:46	07/03/24 16:00	1
Motor Oil Range Organics [C28-C40]	ND		49		mg/Kg		07/03/24 09:46	07/03/24 16:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*92*		*62 - 134*	*07/03/24 09:46*	*07/03/24 16:00*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**470**		59		mg/Kg		07/03/24 12:45	07/03/24 21:54	20

Client Sample Results

Client: Vertex
Project/Site: JRU D1 1A CTB

Job ID: 885-7239-1

Client Sample ID: BH24-13 2.0'

Date Collected: 06/28/24 13:10
Date Received: 07/02/24 08:03

Lab Sample ID: 885-7239-10

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		07/02/24 13:17	07/03/24 19:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*35 - 166*	*07/02/24 13:17*	*07/03/24 19:55*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		07/02/24 13:17	07/03/24 19:55	1
Ethylbenzene	ND		0.048		mg/Kg		07/02/24 13:17	07/03/24 19:55	1
Toluene	ND		0.048		mg/Kg		07/02/24 13:17	07/03/24 19:55	1
Xylenes, Total	ND		0.097		mg/Kg		07/02/24 13:17	07/03/24 19:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*48 - 145*	*07/02/24 13:17*	*07/03/24 19:55*	*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		07/03/24 09:46	07/03/24 16:11	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		07/03/24 09:46	07/03/24 16:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*86*		*62 - 134*	*07/03/24 09:46*	*07/03/24 16:11*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**170**		60		mg/Kg		07/03/24 12:45	07/03/24 22:07	20

Client Sample Results

Client: Vertex
Project/Site: JRU D1 1A CTB

Job ID: 885-7239-1

Client Sample ID: BH24-14 0.0'

Date Collected: 06/28/24 13:20
Date Received: 07/02/24 08:03

Lab Sample ID: 885-7239-11

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		07/02/24 13:17	07/03/24 20:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*35 - 166*	*07/02/24 13:17*	*07/03/24 20:17*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		07/02/24 13:17	07/03/24 20:17	1
Ethylbenzene	ND		0.048		mg/Kg		07/02/24 13:17	07/03/24 20:17	1
Toluene	ND		0.048		mg/Kg		07/02/24 13:17	07/03/24 20:17	1
Xylenes, Total	ND		0.096		mg/Kg		07/02/24 13:17	07/03/24 20:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*48 - 145*	*07/02/24 13:17*	*07/03/24 20:17*	*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]	**11**		9.7		mg/Kg		07/03/24 09:46	07/03/24 16:22	1
Motor Oil Range Organics [C28-C40]	ND		48		mg/Kg		07/03/24 09:46	07/03/24 16:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*89*		*62 - 134*	*07/03/24 09:46*	*07/03/24 16:22*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**320**		60		mg/Kg		07/03/24 12:45	07/03/24 22:19	20

Client Sample Results

Client: Vertex
Project/Site: JRU D1 1A CTB

Job ID: 885-7239-1

Client Sample ID: BH24-14 2.0'

Date Collected: 06/28/24 13:30
Date Received: 07/02/24 08:03

Lab Sample ID: 885-7239-12

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		07/02/24 13:17	07/03/24 20:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*35 - 166*	*07/02/24 13:17*	*07/03/24 20:38*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		07/02/24 13:17	07/03/24 20:38	1
Ethylbenzene	ND		0.048		mg/Kg		07/02/24 13:17	07/03/24 20:38	1
Toluene	ND		0.048		mg/Kg		07/02/24 13:17	07/03/24 20:38	1
Xylenes, Total	ND		0.097		mg/Kg		07/02/24 13:17	07/03/24 20:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*48 - 145*	*07/02/24 13:17*	*07/03/24 20:38*	*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		07/03/24 09:46	07/03/24 16:33	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		07/03/24 09:46	07/03/24 16:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*90*		*62 - 134*	*07/03/24 09:46*	*07/03/24 16:33*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**330**		60		mg/Kg		07/03/24 12:45	07/03/24 22:31	20

Client Sample Results

Client: Vertex
Project/Site: JRU D1 1A CTB

Job ID: 885-7239-1

Client Sample ID: BH24-02 4.0'

Date Collected: 06/29/24 08:00
Date Received: 07/02/24 08:03

Lab Sample ID: 885-7239-13

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		4.9		mg/Kg		07/03/24 08:25	07/08/24 10:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*35 - 166*	*07/03/24 08:25*	*07/08/24 10:48*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		07/03/24 08:25	07/08/24 10:48	1
Ethylbenzene	ND		0.049		mg/Kg		07/03/24 08:25	07/08/24 10:48	1
Toluene	ND		0.049		mg/Kg		07/03/24 08:25	07/08/24 10:48	1
Xylenes, Total	ND		0.099		mg/Kg		07/03/24 08:25	07/08/24 10:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*48 - 145*	*07/03/24 08:25*	*07/08/24 10:48*	*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]	**36**		9.3		mg/Kg		07/03/24 14:13	07/05/24 10:03	1
Motor Oil Range Organics [C28-C40]	**53**		46		mg/Kg		07/03/24 14:13	07/05/24 10:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*103*		*62 - 134*	*07/03/24 14:13*	*07/05/24 10:03*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**6100**		300		mg/Kg		07/05/24 15:35	07/10/24 04:40	100

Client Sample Results

Client: Vertex
Project/Site: JRU D1 1A CTB

Job ID: 885-7239-1

Client Sample ID: BH24-07 4.0'

Date Collected: 06/29/24 08:10
Date Received: 07/02/24 08:03

Lab Sample ID: 885-7239-14

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		4.9		mg/Kg		07/03/24 08:25	07/08/24 11:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*35 - 166*	*07/03/24 08:25*	*07/08/24 11:54*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		07/03/24 08:25	07/08/24 11:54	1
Ethylbenzene	ND		0.049		mg/Kg		07/03/24 08:25	07/08/24 11:54	1
Toluene	ND		0.049		mg/Kg		07/03/24 08:25	07/08/24 11:54	1
Xylenes, Total	ND		0.099		mg/Kg		07/03/24 08:25	07/08/24 11:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*48 - 145*	*07/03/24 08:25*	*07/08/24 11:54*	*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		8.4		mg/Kg		07/03/24 14:13	07/05/24 10:14	1
Motor Oil Range Organics [C28-C40]	ND		42		mg/Kg		07/03/24 14:13	07/05/24 10:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*103*		*62 - 134*	*07/03/24 14:13*	*07/05/24 10:14*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**110**		60		mg/Kg		07/05/24 11:52	07/05/24 13:12	20

Client Sample Results

Client: Vertex
Project/Site: JRU D1 1A CTB

Job ID: 885-7239-1

Client Sample ID: BH24-16 0.0'

Date Collected: 06/29/24 08:30
Date Received: 07/02/24 08:03

Lab Sample ID: 885-7239-17

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		4.6		mg/Kg		07/12/24 12:16	07/13/24 17:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*35 - 166*	*07/12/24 12:16*	*07/13/24 17:28*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.023		mg/Kg		07/12/24 12:16	07/13/24 17:28	1
Ethylbenzene	ND		0.046		mg/Kg		07/12/24 12:16	07/13/24 17:28	1
Toluene	ND		0.046		mg/Kg		07/12/24 12:16	07/13/24 17:28	1
Xylenes, Total	ND		0.092		mg/Kg		07/12/24 12:16	07/13/24 17:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*48 - 145*	*07/12/24 12:16*	*07/13/24 17:28*	*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]	**26**		9.0		mg/Kg		07/12/24 14:53	07/15/24 12:29	1
Motor Oil Range Organics [C28-C40]	ND		45		mg/Kg		07/12/24 14:53	07/15/24 12:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*89*		*62 - 134*	*07/12/24 14:53*	*07/15/24 12:29*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**610**		60		mg/Kg		07/15/24 12:48	07/15/24 16:02	20

Client Sample Results

Client: Vertex
Project/Site: JRU D1 1A CTB

Job ID: 885-7239-1

Client Sample ID: BH24-16 2.0'

Date Collected: 06/29/24 08:35
Date Received: 07/02/24 08:03

Lab Sample ID: 885-7239-18

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		4.9		mg/Kg		07/12/24 12:16	07/13/24 17:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*35 - 166*	*07/12/24 12:16*	*07/13/24 17:52*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		07/12/24 12:16	07/13/24 17:52	1
Ethylbenzene	ND		0.049		mg/Kg		07/12/24 12:16	07/13/24 17:52	1
Toluene	ND		0.049		mg/Kg		07/12/24 12:16	07/13/24 17:52	1
Xylenes, Total	ND		0.098		mg/Kg		07/12/24 12:16	07/13/24 17:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*48 - 145*	*07/12/24 12:16*	*07/13/24 17:52*	*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		9.4		mg/Kg		07/12/24 14:53	07/15/24 12:40	1
Motor Oil Range Organics [C28-C40]	ND		47		mg/Kg		07/12/24 14:53	07/15/24 12:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*96*		*62 - 134*	*07/12/24 14:53*	*07/15/24 12:40*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**150**		60		mg/Kg		07/15/24 12:48	07/15/24 16:39	20

Client Sample Results

Client: Vertex
Project/Site: JRU D1 1A CTB

Job ID: 885-7239-1

Client Sample ID: BH24-02 5.0'

Date Collected: 06/29/24 10:30
Date Received: 07/02/24 08:03

Lab Sample ID: 885-7239-19

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		07/03/24 08:25	07/08/24 12:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*35 - 166*	*07/03/24 08:25*	*07/08/24 12:59*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		07/03/24 08:25	07/08/24 12:59	1
Ethylbenzene	ND		0.050		mg/Kg		07/03/24 08:25	07/08/24 12:59	1
Toluene	ND		0.050		mg/Kg		07/03/24 08:25	07/08/24 12:59	1
Xylenes, Total	ND		0.10		mg/Kg		07/03/24 08:25	07/08/24 12:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*48 - 145*	*07/03/24 08:25*	*07/08/24 12:59*	*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		9.1		mg/Kg		07/03/24 14:13	07/05/24 10:24	1
Motor Oil Range Organics [C28-C40]	ND		45		mg/Kg		07/03/24 14:13	07/05/24 10:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*97*		*62 - 134*	*07/03/24 14:13*	*07/05/24 10:24*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2900**		150		mg/Kg		07/05/24 11:52	07/08/24 17:26	50

Client Sample Results

Client: Vertex
Project/Site: JRU D1 1A CTB

Job ID: 885-7239-1

Client Sample ID: BH24-02 6.0'

Date Collected: 06/29/24 10:40
Date Received: 07/02/24 08:03

Lab Sample ID: 885-7239-20

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		07/03/24 08:25	07/08/24 13:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*35 - 166*	*07/03/24 08:25*	*07/08/24 13:21*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		07/03/24 08:25	07/08/24 13:21	1
Ethylbenzene	ND		0.050		mg/Kg		07/03/24 08:25	07/08/24 13:21	1
Toluene	ND		0.050		mg/Kg		07/03/24 08:25	07/08/24 13:21	1
Xylenes, Total	ND		0.10		mg/Kg		07/03/24 08:25	07/08/24 13:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*48 - 145*	*07/03/24 08:25*	*07/08/24 13:21*	*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		9.2		mg/Kg		07/03/24 14:13	07/05/24 10:35	1
Motor Oil Range Organics [C28-C40]	ND		46		mg/Kg		07/03/24 14:13	07/05/24 10:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*99*		*62 - 134*	*07/03/24 14:13*	*07/05/24 10:35*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2300**		150		mg/Kg		07/05/24 11:52	07/08/24 17:39	50

Client Sample Results

Client: Vertex
Project/Site: JRU D1 1A CTB

Job ID: 885-7239-1

Client Sample ID: BH24-02 7.0'

Date Collected: 06/29/24 11:30
Date Received: 07/02/24 08:03

Lab Sample ID: 885-7239-21

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		4.9		mg/Kg		07/03/24 08:25	07/08/24 13:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*35 - 166*	*07/03/24 08:25*	*07/08/24 13:43*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg		07/03/24 08:25	07/08/24 13:43	1
Ethylbenzene	ND		0.049		mg/Kg		07/03/24 08:25	07/08/24 13:43	1
Toluene	ND		0.049		mg/Kg		07/03/24 08:25	07/08/24 13:43	1
Xylenes, Total	ND		0.097		mg/Kg		07/03/24 08:25	07/08/24 13:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*48 - 145*	*07/03/24 08:25*	*07/08/24 13:43*	*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		8.5		mg/Kg		07/03/24 14:13	07/05/24 10:46	1
Motor Oil Range Organics [C28-C40]	ND		42		mg/Kg		07/03/24 14:13	07/05/24 10:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*96*		*62 - 134*	*07/03/24 14:13*	*07/05/24 10:46*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1300**		60		mg/Kg		07/05/24 11:52	07/05/24 13:49	20

Client Sample Results

Client: Vertex
Project/Site: JRU D1 1A CTB

Job ID: 885-7239-1

Client Sample ID: BH24-02 8.0'

Date Collected: 06/29/24 11:40
Date Received: 07/02/24 08:03

Lab Sample ID: 885-7239-22

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		4.9		mg/Kg		07/03/24 08:25	07/08/24 14:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*35 - 166*	*07/03/24 08:25*	*07/08/24 14:04*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		07/03/24 08:25	07/08/24 14:04	1
Ethylbenzene	ND		0.049		mg/Kg		07/03/24 08:25	07/08/24 14:04	1
Toluene	ND		0.049		mg/Kg		07/03/24 08:25	07/08/24 14:04	1
Xylenes, Total	ND		0.099		mg/Kg		07/03/24 08:25	07/08/24 14:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*48 - 145*	*07/03/24 08:25*	*07/08/24 14:04*	*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		9.2		mg/Kg		07/03/24 14:13	07/05/24 10:56	1
Motor Oil Range Organics [C28-C40]	ND		46		mg/Kg		07/03/24 14:13	07/05/24 10:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*97*		*62 - 134*	*07/03/24 14:13*	*07/05/24 10:56*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1700**		61		mg/Kg		07/05/24 11:52	07/05/24 14:01	20

QC Sample Results

Client: Vertex
Project/Site: JRU D1 1A CTB

Job ID: 885-7239-1

Method: 8015M/D - Gasoline Range Organics (GRO) (GC)

Lab Sample ID: MB 885-7806/1-A
Matrix: Solid
Analysis Batch: 7936

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 7806

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		5.0		mg/Kg		07/02/24 13:17	07/03/24 11:30	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*35 - 166*	*07/02/24 13:17*	*07/03/24 11:30*	*1*

Lab Sample ID: LCS 885-7806/2-A
Matrix: Solid
Analysis Batch: 7936

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 7806

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			25.0	24.5		mg/Kg		98	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*206*	*S1+*	*35 - 166*

Lab Sample ID: MB 885-7846/1-A
Matrix: Solid
Analysis Batch: 8101

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 7846

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		5.0		mg/Kg		07/03/24 08:25	07/08/24 10:26	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*35 - 166*	*07/03/24 08:25*	*07/08/24 10:26*	*1*

Lab Sample ID: LCS 885-7846/2-A
Matrix: Solid
Analysis Batch: 8101

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 7846

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			25.0	23.2		mg/Kg		93	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*201*	*S1+*	*35 - 166*

Lab Sample ID: 885-7239-13 MS
Matrix: Solid
Analysis Batch: 8101

Client Sample ID: BH24-02 4.0'
Prep Type: Total/NA
Prep Batch: 7846

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	ND		24.7	21.4		mg/Kg		87	70 - 130		

QC Sample Results

Client: Vertex
Project/Site: JRU D1 1A CTB

Job ID: 885-7239-1

Method: 8015M/D - Gasoline Range Organics (GRO) (GC) (Continued)

Lab Sample ID: 885-7239-13 MS
Matrix: Solid
Analysis Batch: 8101

Client Sample ID: BH24-02 4.0'
Prep Type: Total/NA
Prep Batch: 7846

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	*202*	*S1+*	*35 - 166*

Lab Sample ID: 885-7239-13 MSD
Matrix: Solid
Analysis Batch: 8101

Client Sample ID: BH24-02 4.0'
Prep Type: Total/NA
Prep Batch: 7846

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	ND		24.8	21.0		mg/Kg		85	70 - 130	2	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	*199*	*S1+*	*35 - 166*

Lab Sample ID: MB 885-8343/1-A
Matrix: Solid
Analysis Batch: 8408

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 8343

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		5.0		mg/Kg		07/12/24 12:16	07/13/24 17:05	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*98*		*35 - 166*	*07/12/24 12:16*	*07/13/24 17:05*	*1*

Lab Sample ID: LCS 885-8343/2-A
Matrix: Solid
Analysis Batch: 8408

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 8343

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			25.0	24.0		mg/Kg		96	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	*210*	*S1+*	*35 - 166*

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 885-7806/1-A
Matrix: Solid
Analysis Batch: 7937

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 7806

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		07/02/24 13:17	07/03/24 11:30	1
Ethylbenzene	ND		0.050		mg/Kg		07/02/24 13:17	07/03/24 11:30	1
Toluene	ND		0.050		mg/Kg		07/02/24 13:17	07/03/24 11:30	1
Xylenes, Total	ND		0.10		mg/Kg		07/02/24 13:17	07/03/24 11:30	1

QC Sample Results

Client: Vertex
Project/Site: JRU D1 1A CTB

Job ID: 885-7239-1

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

Lab Sample ID: MB 885-7806/1-A
Matrix: Solid
Analysis Batch: 7937

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 7806

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		48 - 145	07/02/24 13:17	07/03/24 11:30	1

Lab Sample ID: LCS 885-7806/3-A
Matrix: Solid
Analysis Batch: 7937

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 7806

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	1.00	0.775		mg/Kg		77	70 - 130
Ethylbenzene	1.00	0.847		mg/Kg		85	70 - 130
m-Xylene & p-Xylene	2.00	1.70		mg/Kg		85	70 - 130
o-Xylene	1.00	0.851		mg/Kg		85	70 - 130
Toluene	1.00	0.815		mg/Kg		82	70 - 130
Xylenes, Total	3.00	2.55		mg/Kg		85	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	93		48 - 145

Lab Sample ID: MB 885-7846/1-A
Matrix: Solid
Analysis Batch: 8102

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 7846

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		07/03/24 08:25	07/08/24 10:26	1
Ethylbenzene	ND		0.050	mg/Kg		07/03/24 08:25	07/08/24 10:26	1
Toluene	ND		0.050	mg/Kg		07/03/24 08:25	07/08/24 10:26	1
Xylenes, Total	ND		0.10	mg/Kg		07/03/24 08:25	07/08/24 10:26	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		48 - 145	07/03/24 08:25	07/08/24 10:26	1

Lab Sample ID: LCS 885-7846/3-A
Matrix: Solid
Analysis Batch: 8102

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 7846

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	1.00	0.922		mg/Kg		92	70 - 130
Ethylbenzene	1.00	0.917		mg/Kg		92	70 - 130
m-Xylene & p-Xylene	2.00	1.84		mg/Kg		92	70 - 130
o-Xylene	1.00	0.915		mg/Kg		91	70 - 130
Toluene	1.00	0.922		mg/Kg		92	70 - 130
Xylenes, Total	3.00	2.75		mg/Kg		92	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	90		48 - 145

QC Sample Results

Client: Vertex
Project/Site: JRU D1 1A CTB

Job ID: 885-7239-1

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

Lab Sample ID: 885-7239-14 MS
Matrix: Solid
Analysis Batch: 8102

Client Sample ID: BH24-07 4.0'
Prep Type: Total/NA
Prep Batch: 7846

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	ND		0.993	0.832		mg/Kg		84	70 - 130
Ethylbenzene	ND		0.993	0.848		mg/Kg		85	70 - 130
m-Xylene & p-Xylene	ND		1.99	1.69		mg/Kg		85	70 - 130
o-Xylene	ND		0.993	0.857		mg/Kg		86	70 - 130
Toluene	ND		0.993	0.840		mg/Kg		85	70 - 130
Xylenes, Total	ND		2.98	2.54		mg/Kg		85	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*91*		*48 - 145*

Lab Sample ID: 885-7239-14 MSD
Matrix: Solid
Analysis Batch: 8102

Client Sample ID: BH24-07 4.0'
Prep Type: Total/NA
Prep Batch: 7846

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	ND		0.993	0.861		mg/Kg		87	70 - 130	3	20
Ethylbenzene	ND		0.993	0.858		mg/Kg		86	70 - 130	1	20
m-Xylene & p-Xylene	ND		1.99	1.72		mg/Kg		87	70 - 130	2	20
o-Xylene	ND		0.993	0.857		mg/Kg		86	70 - 130	0	20
Toluene	ND		0.993	0.845		mg/Kg		85	70 - 130	1	20
Xylenes, Total	ND		2.98	2.58		mg/Kg		86	70 - 130	1	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*91*		*48 - 145*

Lab Sample ID: MB 885-8343/1-A
Matrix: Solid
Analysis Batch: 8409

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 8343

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg		07/12/24 12:16	07/13/24 17:05	1
Ethylbenzene	ND		0.050		mg/Kg		07/12/24 12:16	07/13/24 17:05	1
Toluene	ND		0.050		mg/Kg		07/12/24 12:16	07/13/24 17:05	1
Xylenes, Total	ND		0.10		mg/Kg		07/12/24 12:16	07/13/24 17:05	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*48 - 145*	*07/12/24 12:16*	*07/13/24 17:05*	*1*

Lab Sample ID: LCS 885-8343/3-A
Matrix: Solid
Analysis Batch: 8409

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 8343

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene			1.00	0.903		mg/Kg		90	70 - 130
Ethylbenzene			1.00	0.856		mg/Kg		86	70 - 130
m-Xylene & p-Xylene			2.00	1.74		mg/Kg		87	70 - 130
o-Xylene			1.00	0.841		mg/Kg		84	70 - 130
Toluene			1.00	0.851		mg/Kg		85	70 - 130

QC Sample Results

Client: Vertex
Project/Site: JRU D1 1A CTB

Job ID: 885-7239-1

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

Lab Sample ID: LCS 885-8343/3-A
Matrix: Solid
Analysis Batch: 8409

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 8343

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Xylenes, Total			3.00	2.58		mg/Kg		86	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*91*		*48 - 145*

Method: 8015M/D - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 885-7860/1-A
Matrix: Solid
Analysis Batch: 7876

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 7860

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10		mg/Kg		07/03/24 09:46	07/03/24 12:35	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		07/03/24 09:46	07/03/24 12:35	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*83*		*62 - 134*	*07/03/24 09:46*	*07/03/24 12:35*	*1*

Lab Sample ID: LCS 885-7860/2-A
Matrix: Solid
Analysis Batch: 7876

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 7860

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics [C10-C28]			50.0	49.3		mg/Kg		99	60 - 135		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Di-n-octyl phthalate (Surr)	*89*		*62 - 134*

Lab Sample ID: 885-7239-12 MS
Matrix: Solid
Analysis Batch: 7876

Client Sample ID: BH24-14 2.0'
Prep Type: Total/NA
Prep Batch: 7860

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics [C10-C28]	ND		50.0	47.3		mg/Kg		95	44 - 136		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Di-n-octyl phthalate (Surr)	*92*		*62 - 134*

Lab Sample ID: 885-7239-12 MSD
Matrix: Solid
Analysis Batch: 7876

Client Sample ID: BH24-14 2.0'
Prep Type: Total/NA
Prep Batch: 7860

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		49.1	48.7		mg/Kg		99	44 - 136	3	32

QC Sample Results

Client: Vertex
Project/Site: JRU D1 1A CTB

Job ID: 885-7239-1

Method: 8015M/D - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: 885-7239-12 MSD
Matrix: Solid
Analysis Batch: 7876

Client Sample ID: BH24-14 2.0'
Prep Type: Total/NA
Prep Batch: 7860

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Di-n-octyl phthalate (Surr)	*99*		*62 - 134*

Lab Sample ID: MB 885-7883/1-A
Matrix: Solid
Analysis Batch: 7925

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 7883

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10		mg/Kg		07/03/24 14:13	07/05/24 09:42	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		07/03/24 14:13	07/05/24 09:42	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	*99*		*62 - 134*	*07/03/24 14:13*	*07/05/24 09:42*	*1*

Lab Sample ID: LCS 885-7883/2-A
Matrix: Solid
Analysis Batch: 7925

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 7883

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics [C10-C28]			50.0	47.9		mg/Kg		96	60 - 135		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Di-n-octyl phthalate (Surr)	*103*		*62 - 134*

Lab Sample ID: MB 885-8353/1-A
Matrix: Solid
Analysis Batch: 8410

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 8353

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10		mg/Kg		07/12/24 14:53	07/15/24 11:46	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		07/12/24 14:53	07/15/24 11:46	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	*90*		*62 - 134*	*07/12/24 14:53*	*07/15/24 11:46*	*1*

Lab Sample ID: LCS 885-8353/2-A
Matrix: Solid
Analysis Batch: 8410

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 8353

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics [C10-C28]			50.0	42.5		mg/Kg		85	60 - 135		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Di-n-octyl phthalate (Surr)	*82*		*62 - 134*

QC Sample Results

Client: Vertex
Project/Site: JRU D1 1A CTB

Job ID: 885-7239-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 885-7880/1-A
Matrix: Solid
Analysis Batch: 7895

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 7880

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0		mg/Kg		07/03/24 12:45	07/03/24 16:33	1

Lab Sample ID: LCS 885-7880/2-A
Matrix: Solid
Analysis Batch: 7895

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 7880

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			30.0	27.8		mg/Kg		93	90 - 110		

Lab Sample ID: MB 885-7943/1-A
Matrix: Solid
Analysis Batch: 8013

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 7943

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0		mg/Kg		07/05/24 11:52	07/05/24 12:30	1

Lab Sample ID: LCS 885-7943/2-A
Matrix: Solid
Analysis Batch: 8013

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 7943

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			30.0	29.6		mg/Kg		99	90 - 110		

Lab Sample ID: MB 885-7952/1-A
Matrix: Solid
Analysis Batch: 8024

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 7952

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0		mg/Kg		07/05/24 15:35	07/05/24 17:03	1

Lab Sample ID: LCS 885-7952/2-A
Matrix: Solid
Analysis Batch: 8024

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 7952

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			30.0	28.2		mg/Kg		94	90 - 110		

Lab Sample ID: MB 885-8013/4
Matrix: Solid
Analysis Batch: 8013

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

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50		mg/Kg			07/05/24 10:52	1

Lab Sample ID: MRL 885-8013/3
Matrix: Solid
Analysis Batch: 8013

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

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			0.500	0.564		mg/L		113	50 - 150		

QC Sample Results

Client: Vertex
Project/Site: JRU D1 1A CTB

Job ID: 885-7239-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 885-8025/1-A
Matrix: Solid
Analysis Batch: 8052

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 8025

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0		mg/Kg		07/08/24 12:29	07/08/24 15:56	1

Lab Sample ID: LCS 885-8025/2-A
Matrix: Solid
Analysis Batch: 8052

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 8025

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			30.0	31.0		mg/Kg		103	90 - 110		

Lab Sample ID: MRL 885-8025/20-A
Matrix: Solid
Analysis Batch: 8052

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 8025

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			3.00	3.40		mg/L		113	50 - 150		

Lab Sample ID: MB 885-8135/9
Matrix: Solid
Analysis Batch: 8135

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

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50		mg/Kg			07/09/24 09:07	1

Lab Sample ID: MRL 885-8135/8
Matrix: Solid
Analysis Batch: 8135

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

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			0.500	0.553		mg/L		111	50 - 150		

Lab Sample ID: MB 885-8431/1-A
Matrix: Solid
Analysis Batch: 8467

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 8431

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0		mg/Kg		07/15/24 12:48	07/15/24 15:37	1

Lab Sample ID: LCS 885-8431/2-A
Matrix: Solid
Analysis Batch: 8467

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 8431

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			30.0	28.2		mg/Kg		94	90 - 110		

QC Association Summary

Client: Vertex
Project/Site: JRU D1 1A CTB

Job ID: 885-7239-1

GC VOA

Prep Batch: 7806

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7239-1	BH24-09 0.0'	Total/NA	Solid	5030C	
885-7239-2	BH24-09 2.0'	Total/NA	Solid	5030C	
885-7239-3	BH24-10 0.0'	Total/NA	Solid	5030C	
885-7239-4	BH24-10 2.0'	Total/NA	Solid	5030C	
885-7239-5	BH24-11 0.0'	Total/NA	Solid	5030C	
885-7239-6	BH24-11 2.0'	Total/NA	Solid	5030C	
885-7239-7	BH24-12 0.0'	Total/NA	Solid	5030C	
885-7239-8	BH24-12 2.0'	Total/NA	Solid	5030C	
885-7239-9	BH24-13 0.0'	Total/NA	Solid	5030C	
885-7239-10	BH24-13 2.0'	Total/NA	Solid	5030C	
885-7239-11	BH24-14 0.0'	Total/NA	Solid	5030C	
885-7239-12	BH24-14 2.0'	Total/NA	Solid	5030C	
MB 885-7806/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 885-7806/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCS 885-7806/3-A	Lab Control Sample	Total/NA	Solid	5030C	

Prep Batch: 7846

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7239-13	BH24-02 4.0'	Total/NA	Solid	5030C	
885-7239-14	BH24-07 4.0'	Total/NA	Solid	5030C	
885-7239-19	BH24-02 5.0'	Total/NA	Solid	5030C	
885-7239-20	BH24-02 6.0'	Total/NA	Solid	5030C	
885-7239-21	BH24-02 7.0'	Total/NA	Solid	5030C	
885-7239-22	BH24-02 8.0'	Total/NA	Solid	5030C	
MB 885-7846/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 885-7846/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCS 885-7846/3-A	Lab Control Sample	Total/NA	Solid	5030C	
885-7239-13 MS	BH24-02 4.0'	Total/NA	Solid	5030C	
885-7239-13 MSD	BH24-02 4.0'	Total/NA	Solid	5030C	
885-7239-14 MS	BH24-07 4.0'	Total/NA	Solid	5030C	
885-7239-14 MSD	BH24-07 4.0'	Total/NA	Solid	5030C	

Analysis Batch: 7936

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7239-1	BH24-09 0.0'	Total/NA	Solid	8015M/D	7806
885-7239-2	BH24-09 2.0'	Total/NA	Solid	8015M/D	7806
885-7239-3	BH24-10 0.0'	Total/NA	Solid	8015M/D	7806
885-7239-4	BH24-10 2.0'	Total/NA	Solid	8015M/D	7806
885-7239-5	BH24-11 0.0'	Total/NA	Solid	8015M/D	7806
885-7239-6	BH24-11 2.0'	Total/NA	Solid	8015M/D	7806
885-7239-7	BH24-12 0.0'	Total/NA	Solid	8015M/D	7806
885-7239-8	BH24-12 2.0'	Total/NA	Solid	8015M/D	7806
885-7239-9	BH24-13 0.0'	Total/NA	Solid	8015M/D	7806
885-7239-10	BH24-13 2.0'	Total/NA	Solid	8015M/D	7806
885-7239-11	BH24-14 0.0'	Total/NA	Solid	8015M/D	7806
885-7239-12	BH24-14 2.0'	Total/NA	Solid	8015M/D	7806
MB 885-7806/1-A	Method Blank	Total/NA	Solid	8015M/D	7806
LCS 885-7806/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	7806

QC Association Summary

Client: Vertex
Project/Site: JRU D1 1A CTB

Job ID: 885-7239-1

GC VOA

Analysis Batch: 7937

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7239-1	BH24-09 0.0'	Total/NA	Solid	8021B	7806
885-7239-2	BH24-09 2.0'	Total/NA	Solid	8021B	7806
885-7239-3	BH24-10 0.0'	Total/NA	Solid	8021B	7806
885-7239-4	BH24-10 2.0'	Total/NA	Solid	8021B	7806
885-7239-5	BH24-11 0.0'	Total/NA	Solid	8021B	7806
885-7239-6	BH24-11 2.0'	Total/NA	Solid	8021B	7806
885-7239-7	BH24-12 0.0'	Total/NA	Solid	8021B	7806
885-7239-8	BH24-12 2.0'	Total/NA	Solid	8021B	7806
885-7239-9	BH24-13 0.0'	Total/NA	Solid	8021B	7806
885-7239-10	BH24-13 2.0'	Total/NA	Solid	8021B	7806
885-7239-11	BH24-14 0.0'	Total/NA	Solid	8021B	7806
885-7239-12	BH24-14 2.0'	Total/NA	Solid	8021B	7806
MB 885-7806/1-A	Method Blank	Total/NA	Solid	8021B	7806
LCS 885-7806/3-A	Lab Control Sample	Total/NA	Solid	8021B	7806

Analysis Batch: 8101

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7239-13	BH24-02 4.0'	Total/NA	Solid	8015M/D	7846
885-7239-14	BH24-07 4.0'	Total/NA	Solid	8015M/D	7846
885-7239-19	BH24-02 5.0'	Total/NA	Solid	8015M/D	7846
885-7239-20	BH24-02 6.0'	Total/NA	Solid	8015M/D	7846
885-7239-21	BH24-02 7.0'	Total/NA	Solid	8015M/D	7846
885-7239-22	BH24-02 8.0'	Total/NA	Solid	8015M/D	7846
MB 885-7846/1-A	Method Blank	Total/NA	Solid	8015M/D	7846
LCS 885-7846/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	7846
885-7239-13 MS	BH24-02 4.0'	Total/NA	Solid	8015M/D	7846
885-7239-13 MSD	BH24-02 4.0'	Total/NA	Solid	8015M/D	7846

Analysis Batch: 8102

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7239-13	BH24-02 4.0'	Total/NA	Solid	8021B	7846
885-7239-14	BH24-07 4.0'	Total/NA	Solid	8021B	7846
885-7239-19	BH24-02 5.0'	Total/NA	Solid	8021B	7846
885-7239-20	BH24-02 6.0'	Total/NA	Solid	8021B	7846
885-7239-21	BH24-02 7.0'	Total/NA	Solid	8021B	7846
885-7239-22	BH24-02 8.0'	Total/NA	Solid	8021B	7846
MB 885-7846/1-A	Method Blank	Total/NA	Solid	8021B	7846
LCS 885-7846/3-A	Lab Control Sample	Total/NA	Solid	8021B	7846
885-7239-14 MS	BH24-07 4.0'	Total/NA	Solid	8021B	7846
885-7239-14 MSD	BH24-07 4.0'	Total/NA	Solid	8021B	7846

Prep Batch: 8343

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7239-17	BH24-16 0.0'	Total/NA	Solid	5030C	
885-7239-18	BH24-16 2.0'	Total/NA	Solid	5030C	
MB 885-8343/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 885-8343/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCS 885-8343/3-A	Lab Control Sample	Total/NA	Solid	5030C	

QC Association Summary

Client: Vertex
Project/Site: JRU D1 1A CTB

Job ID: 885-7239-1

GC VOA

Analysis Batch: 8408

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7239-17	BH24-16 0.0'	Total/NA	Solid	8015M/D	8343
885-7239-18	BH24-16 2.0'	Total/NA	Solid	8015M/D	8343
MB 885-8343/1-A	Method Blank	Total/NA	Solid	8015M/D	8343
LCS 885-8343/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	8343

Analysis Batch: 8409

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7239-17	BH24-16 0.0'	Total/NA	Solid	8021B	8343
885-7239-18	BH24-16 2.0'	Total/NA	Solid	8021B	8343
MB 885-8343/1-A	Method Blank	Total/NA	Solid	8021B	8343
LCS 885-8343/3-A	Lab Control Sample	Total/NA	Solid	8021B	8343

GC Semi VOA

Prep Batch: 7860

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7239-1	BH24-09 0.0'	Total/NA	Solid	SHAKE	
885-7239-2	BH24-09 2.0'	Total/NA	Solid	SHAKE	
885-7239-3	BH24-10 0.0'	Total/NA	Solid	SHAKE	
885-7239-4	BH24-10 2.0'	Total/NA	Solid	SHAKE	
885-7239-5	BH24-11 0.0'	Total/NA	Solid	SHAKE	
885-7239-6	BH24-11 2.0'	Total/NA	Solid	SHAKE	
885-7239-7	BH24-12 0.0'	Total/NA	Solid	SHAKE	
885-7239-8	BH24-12 2.0'	Total/NA	Solid	SHAKE	
885-7239-9	BH24-13 0.0'	Total/NA	Solid	SHAKE	
885-7239-10	BH24-13 2.0'	Total/NA	Solid	SHAKE	
885-7239-11	BH24-14 0.0'	Total/NA	Solid	SHAKE	
885-7239-12	BH24-14 2.0'	Total/NA	Solid	SHAKE	
MB 885-7860/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-7860/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	
885-7239-12 MS	BH24-14 2.0'	Total/NA	Solid	SHAKE	
885-7239-12 MSD	BH24-14 2.0'	Total/NA	Solid	SHAKE	

Analysis Batch: 7876

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7239-1	BH24-09 0.0'	Total/NA	Solid	8015M/D	7860
885-7239-2	BH24-09 2.0'	Total/NA	Solid	8015M/D	7860
885-7239-3	BH24-10 0.0'	Total/NA	Solid	8015M/D	7860
885-7239-4	BH24-10 2.0'	Total/NA	Solid	8015M/D	7860
885-7239-5	BH24-11 0.0'	Total/NA	Solid	8015M/D	7860
885-7239-6	BH24-11 2.0'	Total/NA	Solid	8015M/D	7860
885-7239-7	BH24-12 0.0'	Total/NA	Solid	8015M/D	7860
885-7239-8	BH24-12 2.0'	Total/NA	Solid	8015M/D	7860
885-7239-9	BH24-13 0.0'	Total/NA	Solid	8015M/D	7860
885-7239-10	BH24-13 2.0'	Total/NA	Solid	8015M/D	7860
885-7239-11	BH24-14 0.0'	Total/NA	Solid	8015M/D	7860
885-7239-12	BH24-14 2.0'	Total/NA	Solid	8015M/D	7860
MB 885-7860/1-A	Method Blank	Total/NA	Solid	8015M/D	7860
LCS 885-7860/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	7860
885-7239-12 MS	BH24-14 2.0'	Total/NA	Solid	8015M/D	7860
885-7239-12 MSD	BH24-14 2.0'	Total/NA	Solid	8015M/D	7860

QC Association Summary

Client: Vertex
Project/Site: JRU D1 1A CTB

Job ID: 885-7239-1

GC Semi VOA

Prep Batch: 7883

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7239-13	BH24-02 4.0'	Total/NA	Solid	SHAKE	
885-7239-14	BH24-07 4.0'	Total/NA	Solid	SHAKE	
885-7239-19	BH24-02 5.0'	Total/NA	Solid	SHAKE	
885-7239-20	BH24-02 6.0'	Total/NA	Solid	SHAKE	
885-7239-21	BH24-02 7.0'	Total/NA	Solid	SHAKE	
885-7239-22	BH24-02 8.0'	Total/NA	Solid	SHAKE	
MB 885-7883/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-7883/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	

Analysis Batch: 7925

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7239-13	BH24-02 4.0'	Total/NA	Solid	8015M/D	7883
885-7239-14	BH24-07 4.0'	Total/NA	Solid	8015M/D	7883
885-7239-19	BH24-02 5.0'	Total/NA	Solid	8015M/D	7883
885-7239-20	BH24-02 6.0'	Total/NA	Solid	8015M/D	7883
885-7239-21	BH24-02 7.0'	Total/NA	Solid	8015M/D	7883
885-7239-22	BH24-02 8.0'	Total/NA	Solid	8015M/D	7883
MB 885-7883/1-A	Method Blank	Total/NA	Solid	8015M/D	7883
LCS 885-7883/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	7883

Prep Batch: 8353

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7239-17	BH24-16 0.0'	Total/NA	Solid	SHAKE	
885-7239-18	BH24-16 2.0'	Total/NA	Solid	SHAKE	
MB 885-8353/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-8353/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	

Analysis Batch: 8410

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7239-17	BH24-16 0.0'	Total/NA	Solid	8015M/D	8353
885-7239-18	BH24-16 2.0'	Total/NA	Solid	8015M/D	8353
MB 885-8353/1-A	Method Blank	Total/NA	Solid	8015M/D	8353
LCS 885-8353/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	8353

HPLC/IC

Prep Batch: 7880

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7239-1	BH24-09 0.0'	Total/NA	Solid	300_Prep	
885-7239-2	BH24-09 2.0'	Total/NA	Solid	300_Prep	
885-7239-3	BH24-10 0.0'	Total/NA	Solid	300_Prep	
885-7239-4	BH24-10 2.0'	Total/NA	Solid	300_Prep	
885-7239-5	BH24-11 0.0'	Total/NA	Solid	300_Prep	
885-7239-6	BH24-11 2.0'	Total/NA	Solid	300_Prep	
885-7239-7	BH24-12 0.0'	Total/NA	Solid	300_Prep	
885-7239-8	BH24-12 2.0'	Total/NA	Solid	300_Prep	
885-7239-9	BH24-13 0.0'	Total/NA	Solid	300_Prep	
885-7239-10	BH24-13 2.0'	Total/NA	Solid	300_Prep	
885-7239-11	BH24-14 0.0'	Total/NA	Solid	300_Prep	
885-7239-12	BH24-14 2.0'	Total/NA	Solid	300_Prep	
MB 885-7880/1-A	Method Blank	Total/NA	Solid	300_Prep	

QC Association Summary

Client: Vertex
Project/Site: JRU D1 1A CTB

Job ID: 885-7239-1

HPLC/IC (Continued)

Prep Batch: 7880 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 885-7880/2-A	Lab Control Sample	Total/NA	Solid	300_Prep	

Analysis Batch: 7895

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7239-5	BH24-11 0.0'	Total/NA	Solid	300.0	7880
885-7239-6	BH24-11 2.0'	Total/NA	Solid	300.0	7880
885-7239-7	BH24-12 0.0'	Total/NA	Solid	300.0	7880
885-7239-8	BH24-12 2.0'	Total/NA	Solid	300.0	7880
885-7239-9	BH24-13 0.0'	Total/NA	Solid	300.0	7880
885-7239-10	BH24-13 2.0'	Total/NA	Solid	300.0	7880
885-7239-11	BH24-14 0.0'	Total/NA	Solid	300.0	7880
885-7239-12	BH24-14 2.0'	Total/NA	Solid	300.0	7880
MB 885-7880/1-A	Method Blank	Total/NA	Solid	300.0	7880
LCS 885-7880/2-A	Lab Control Sample	Total/NA	Solid	300.0	7880

Prep Batch: 7943

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7239-14	BH24-07 4.0'	Total/NA	Solid	300_Prep	
885-7239-19	BH24-02 5.0'	Total/NA	Solid	300_Prep	
885-7239-20	BH24-02 6.0'	Total/NA	Solid	300_Prep	
885-7239-21	BH24-02 7.0'	Total/NA	Solid	300_Prep	
885-7239-22	BH24-02 8.0'	Total/NA	Solid	300_Prep	
MB 885-7943/1-A	Method Blank	Total/NA	Solid	300_Prep	
LCS 885-7943/2-A	Lab Control Sample	Total/NA	Solid	300_Prep	

Prep Batch: 7952

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7239-13	BH24-02 4.0'	Total/NA	Solid	300_Prep	
MB 885-7952/1-A	Method Blank	Total/NA	Solid	300_Prep	
LCS 885-7952/2-A	Lab Control Sample	Total/NA	Solid	300_Prep	

Analysis Batch: 8013

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7239-14	BH24-07 4.0'	Total/NA	Solid	300.0	7943
885-7239-21	BH24-02 7.0'	Total/NA	Solid	300.0	7943
885-7239-22	BH24-02 8.0'	Total/NA	Solid	300.0	7943
MB 885-7943/1-A	Method Blank	Total/NA	Solid	300.0	7943
MB 885-8013/4	Method Blank	Total/NA	Solid	300.0	
LCS 885-7943/2-A	Lab Control Sample	Total/NA	Solid	300.0	7943
MRL 885-8013/3	Lab Control Sample	Total/NA	Solid	300.0	

Analysis Batch: 8024

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7239-1	BH24-09 0.0'	Total/NA	Solid	300.0	7880
885-7239-2	BH24-09 2.0'	Total/NA	Solid	300.0	7880
885-7239-3	BH24-10 0.0'	Total/NA	Solid	300.0	7880
MB 885-7952/1-A	Method Blank	Total/NA	Solid	300.0	7952
LCS 885-7952/2-A	Lab Control Sample	Total/NA	Solid	300.0	7952

QC Association Summary

Client: Vertex
Project/Site: JRU D1 1A CTB

Job ID: 885-7239-1

HPLC/IC

Prep Batch: 8025

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 885-8025/1-A	Method Blank	Total/NA	Solid	300_Prep	
LCS 885-8025/2-A	Lab Control Sample	Total/NA	Solid	300_Prep	
MRL 885-8025/20-A	Lab Control Sample	Total/NA	Solid	300_Prep	

Analysis Batch: 8052

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7239-4	BH24-10 2.0'	Total/NA	Solid	300.0	7880
885-7239-19	BH24-02 5.0'	Total/NA	Solid	300.0	7943
885-7239-20	BH24-02 6.0'	Total/NA	Solid	300.0	7943
MB 885-8025/1-A	Method Blank	Total/NA	Solid	300.0	8025
LCS 885-8025/2-A	Lab Control Sample	Total/NA	Solid	300.0	8025
MRL 885-8025/20-A	Lab Control Sample	Total/NA	Solid	300.0	8025

Analysis Batch: 8135

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7239-13	BH24-02 4.0'	Total/NA	Solid	300.0	7952
MB 885-8135/9	Method Blank	Total/NA	Solid	300.0	
MRL 885-8135/8	Lab Control Sample	Total/NA	Solid	300.0	

Prep Batch: 8431

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7239-17	BH24-16 0.0'	Total/NA	Solid	300_Prep	
885-7239-18	BH24-16 2.0'	Total/NA	Solid	300_Prep	
MB 885-8431/1-A	Method Blank	Total/NA	Solid	300_Prep	
LCS 885-8431/2-A	Lab Control Sample	Total/NA	Solid	300_Prep	

Analysis Batch: 8467

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7239-17	BH24-16 0.0'	Total/NA	Solid	300.0	8431
885-7239-18	BH24-16 2.0'	Total/NA	Solid	300.0	8431
MB 885-8431/1-A	Method Blank	Total/NA	Solid	300.0	8431
LCS 885-8431/2-A	Lab Control Sample	Total/NA	Solid	300.0	8431

Lab Chronicle

Client: Vertex
Project/Site: JRU D1 1A CTB

Job ID: 885-7239-1

Client Sample ID: BH24-09 0.0'

Lab Sample ID: 885-7239-1
Matrix: Solid
Date Collected: 06/28/24 08:35
Date Received: 07/02/24 08:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7806	AT	EET ALB	07/02/24 13:17
Total/NA	Analysis	8015M/D		1	7936	AT	EET ALB	07/03/24 16:15
Total/NA	Prep	5030C			7806	AT	EET ALB	07/02/24 13:17
Total/NA	Analysis	8021B		1	7937	AT	EET ALB	07/03/24 16:15
Total/NA	Prep	SHAKE			7860	KR	EET ALB	07/03/24 09:46
Total/NA	Analysis	8015M/D		1	7876	PD	EET ALB	07/03/24 14:33
Total/NA	Prep	300_Prep			7880	RC	EET ALB	07/03/24 12:45
Total/NA	Analysis	300.0		100	8024	JT	EET ALB	07/05/24 15:49

Client Sample ID: BH24-09 2.0'

Lab Sample ID: 885-7239-2
Matrix: Solid
Date Collected: 06/28/24 08:40
Date Received: 07/02/24 08:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7806	AT	EET ALB	07/02/24 13:17
Total/NA	Analysis	8015M/D		1	7936	AT	EET ALB	07/03/24 16:37
Total/NA	Prep	5030C			7806	AT	EET ALB	07/02/24 13:17
Total/NA	Analysis	8021B		1	7937	AT	EET ALB	07/03/24 16:37
Total/NA	Prep	SHAKE			7860	KR	EET ALB	07/03/24 09:46
Total/NA	Analysis	8015M/D		1	7876	PD	EET ALB	07/03/24 14:44
Total/NA	Prep	300_Prep			7880	RC	EET ALB	07/03/24 12:45
Total/NA	Analysis	300.0		50	8024	JT	EET ALB	07/05/24 16:02

Client Sample ID: BH24-10 0.0'

Lab Sample ID: 885-7239-3
Matrix: Solid
Date Collected: 06/28/24 08:45
Date Received: 07/02/24 08:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7806	AT	EET ALB	07/02/24 13:17
Total/NA	Analysis	8015M/D		1	7936	AT	EET ALB	07/03/24 17:21
Total/NA	Prep	5030C			7806	AT	EET ALB	07/02/24 13:17
Total/NA	Analysis	8021B		1	7937	AT	EET ALB	07/03/24 17:21
Total/NA	Prep	SHAKE			7860	KR	EET ALB	07/03/24 09:46
Total/NA	Analysis	8015M/D		1	7876	PD	EET ALB	07/03/24 14:55
Total/NA	Prep	300_Prep			7880	RC	EET ALB	07/03/24 12:45
Total/NA	Analysis	300.0		100	8024	JT	EET ALB	07/05/24 16:39

Client Sample ID: BH24-10 2.0'

Lab Sample ID: 885-7239-4
Matrix: Solid
Date Collected: 06/28/24 08:50
Date Received: 07/02/24 08:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7806	AT	EET ALB	07/02/24 13:17
Total/NA	Analysis	8015M/D		1	7936	AT	EET ALB	07/03/24 17:43

Lab Chronicle

Client: Vertex
Project/Site: JRU D1 1A CTB

Job ID: 885-7239-1

Client Sample ID: BH24-10 2.0'

Lab Sample ID: 885-7239-4
Matrix: Solid
Date Collected: 06/28/24 08:50
Date Received: 07/02/24 08:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7806	AT	EET ALB	07/02/24 13:17
Total/NA	Analysis	8021B		1	7937	AT	EET ALB	07/03/24 17:43
Total/NA	Prep	SHAKE			7860	KR	EET ALB	07/03/24 09:46
Total/NA	Analysis	8015M/D		1	7876	PD	EET ALB	07/03/24 15:05
Total/NA	Prep	300_Prep			7880	RC	EET ALB	07/03/24 12:45
Total/NA	Analysis	300.0		50	8052	JT	EET ALB	07/08/24 16:47

Client Sample ID: BH24-11 0.0'

Lab Sample ID: 885-7239-5
Matrix: Solid
Date Collected: 06/28/24 09:00
Date Received: 07/02/24 08:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7806	AT	EET ALB	07/02/24 13:17
Total/NA	Analysis	8015M/D		1	7936	AT	EET ALB	07/03/24 18:05
Total/NA	Prep	5030C			7806	AT	EET ALB	07/02/24 13:17
Total/NA	Analysis	8021B		1	7937	AT	EET ALB	07/03/24 18:05
Total/NA	Prep	SHAKE			7860	KR	EET ALB	07/03/24 09:46
Total/NA	Analysis	8015M/D		1	7876	PD	EET ALB	07/03/24 15:16
Total/NA	Prep	300_Prep			7880	RC	EET ALB	07/03/24 12:45
Total/NA	Analysis	300.0		20	7895	MA	EET ALB	07/03/24 21:05

Client Sample ID: BH24-11 2.0'

Lab Sample ID: 885-7239-6
Matrix: Solid
Date Collected: 06/28/24 09:05
Date Received: 07/02/24 08:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7806	AT	EET ALB	07/02/24 13:17
Total/NA	Analysis	8015M/D		1	7936	AT	EET ALB	07/03/24 18:27
Total/NA	Prep	5030C			7806	AT	EET ALB	07/02/24 13:17
Total/NA	Analysis	8021B		1	7937	AT	EET ALB	07/03/24 18:27
Total/NA	Prep	SHAKE			7860	KR	EET ALB	07/03/24 09:46
Total/NA	Analysis	8015M/D		1	7876	PD	EET ALB	07/03/24 15:27
Total/NA	Prep	300_Prep			7880	RC	EET ALB	07/03/24 12:45
Total/NA	Analysis	300.0		20	7895	MA	EET ALB	07/03/24 21:17

Client Sample ID: BH24-12 0.0'

Lab Sample ID: 885-7239-7
Matrix: Solid
Date Collected: 06/28/24 09:15
Date Received: 07/02/24 08:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7806	AT	EET ALB	07/02/24 13:17
Total/NA	Analysis	8015M/D		1	7936	AT	EET ALB	07/03/24 18:49
Total/NA	Prep	5030C			7806	AT	EET ALB	07/02/24 13:17
Total/NA	Analysis	8021B		1	7937	AT	EET ALB	07/03/24 18:49

Lab Chronicle

Client: Vertex
Job ID: 885-7239-1
Project/Site: JRU D1 1A CTB

Client Sample ID: BH24-12 0.0'
Lab Sample ID: 885-7239-7
Date Collected: 06/28/24 09:15
Matrix: Solid
Date Received: 07/02/24 08:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	SHAKE			7860	KR	EET ALB	07/03/24 09:46
Total/NA	Analysis	8015M/D		1	7876	PD	EET ALB	07/03/24 15:38
Total/NA	Prep	300_Prep			7880	RC	EET ALB	07/03/24 12:45
Total/NA	Analysis	300.0		20	7895	MA	EET ALB	07/03/24 21:30

Client Sample ID: BH24-12 2.0'
Lab Sample ID: 885-7239-8
Date Collected: 06/28/24 09:20
Matrix: Solid
Date Received: 07/02/24 08:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7806	AT	EET ALB	07/02/24 13:17
Total/NA	Analysis	8015M/D		1	7936	AT	EET ALB	07/03/24 19:11
Total/NA	Prep	5030C			7806	AT	EET ALB	07/02/24 13:17
Total/NA	Analysis	8021B		1	7937	AT	EET ALB	07/03/24 19:11
Total/NA	Prep	SHAKE			7860	KR	EET ALB	07/03/24 09:46
Total/NA	Analysis	8015M/D		1	7876	PD	EET ALB	07/03/24 15:49
Total/NA	Prep	300_Prep			7880	RC	EET ALB	07/03/24 12:45
Total/NA	Analysis	300.0		20	7895	MA	EET ALB	07/03/24 21:42

Client Sample ID: BH24-13 0.0'
Lab Sample ID: 885-7239-9
Date Collected: 06/28/24 13:00
Matrix: Solid
Date Received: 07/02/24 08:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7806	AT	EET ALB	07/02/24 13:17
Total/NA	Analysis	8015M/D		1	7936	AT	EET ALB	07/03/24 19:33
Total/NA	Prep	5030C			7806	AT	EET ALB	07/02/24 13:17
Total/NA	Analysis	8021B		1	7937	AT	EET ALB	07/03/24 19:33
Total/NA	Prep	SHAKE			7860	KR	EET ALB	07/03/24 09:46
Total/NA	Analysis	8015M/D		1	7876	PD	EET ALB	07/03/24 16:00
Total/NA	Prep	300_Prep			7880	RC	EET ALB	07/03/24 12:45
Total/NA	Analysis	300.0		20	7895	MA	EET ALB	07/03/24 21:54

Client Sample ID: BH24-13 2.0'
Lab Sample ID: 885-7239-10
Date Collected: 06/28/24 13:10
Matrix: Solid
Date Received: 07/02/24 08:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7806	AT	EET ALB	07/02/24 13:17
Total/NA	Analysis	8015M/D		1	7936	AT	EET ALB	07/03/24 19:55
Total/NA	Prep	5030C			7806	AT	EET ALB	07/02/24 13:17
Total/NA	Analysis	8021B		1	7937	AT	EET ALB	07/03/24 19:55
Total/NA	Prep	SHAKE			7860	KR	EET ALB	07/03/24 09:46
Total/NA	Analysis	8015M/D		1	7876	PD	EET ALB	07/03/24 16:11

Lab Chronicle

Client: Vertex
Job ID: 885-7239-1
Project/Site: JRU D1 1A CTB

Client Sample ID: BH24-13 2.0'
Lab Sample ID: 885-7239-10
Date Collected: 06/28/24 13:10
Matrix: Solid
Date Received: 07/02/24 08:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	300_Prep			7880	RC	EET ALB	07/03/24 12:45
Total/NA	Analysis	300.0		20	7895	MA	EET ALB	07/03/24 22:07

Client Sample ID: BH24-14 0.0'
Lab Sample ID: 885-7239-11
Date Collected: 06/28/24 13:20
Matrix: Solid
Date Received: 07/02/24 08:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7806	AT	EET ALB	07/02/24 13:17
Total/NA	Analysis	8015M/D		1	7936	AT	EET ALB	07/03/24 20:17
Total/NA	Prep	5030C			7806	AT	EET ALB	07/02/24 13:17
Total/NA	Analysis	8021B		1	7937	AT	EET ALB	07/03/24 20:17
Total/NA	Prep	SHAKE			7860	KR	EET ALB	07/03/24 09:46
Total/NA	Analysis	8015M/D		1	7876	PD	EET ALB	07/03/24 16:22
Total/NA	Prep	300_Prep			7880	RC	EET ALB	07/03/24 12:45
Total/NA	Analysis	300.0		20	7895	MA	EET ALB	07/03/24 22:19

Client Sample ID: BH24-14 2.0'
Lab Sample ID: 885-7239-12
Date Collected: 06/28/24 13:30
Matrix: Solid
Date Received: 07/02/24 08:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7806	AT	EET ALB	07/02/24 13:17
Total/NA	Analysis	8015M/D		1	7936	AT	EET ALB	07/03/24 20:38
Total/NA	Prep	5030C			7806	AT	EET ALB	07/02/24 13:17
Total/NA	Analysis	8021B		1	7937	AT	EET ALB	07/03/24 20:38
Total/NA	Prep	SHAKE			7860	KR	EET ALB	07/03/24 09:46
Total/NA	Analysis	8015M/D		1	7876	PD	EET ALB	07/03/24 16:33
Total/NA	Prep	300_Prep			7880	RC	EET ALB	07/03/24 12:45
Total/NA	Analysis	300.0		20	7895	MA	EET ALB	07/03/24 22:31

Client Sample ID: BH24-02 4.0'
Lab Sample ID: 885-7239-13
Date Collected: 06/29/24 08:00
Matrix: Solid
Date Received: 07/02/24 08:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7846	AT	EET ALB	07/03/24 08:25
Total/NA	Analysis	8015M/D		1	8101	RA	EET ALB	07/08/24 10:48
Total/NA	Prep	5030C			7846	AT	EET ALB	07/03/24 08:25
Total/NA	Analysis	8021B		1	8102	RA	EET ALB	07/08/24 10:48
Total/NA	Prep	SHAKE			7883	DH	EET ALB	07/03/24 14:13
Total/NA	Analysis	8015M/D		1	7925	KR	EET ALB	07/05/24 10:03
Total/NA	Prep	300_Prep			7952	JT	EET ALB	07/05/24 15:35
Total/NA	Analysis	300.0		100	8135	JT	EET ALB	07/10/24 04:40

Lab Chronicle

Client: Vertex
Job ID: 885-7239-1
Project/Site: JRU D1 1A CTB

Client Sample ID: BH24-07 4.0'
Lab Sample ID: 885-7239-14
Date Collected: 06/29/24 08:10
Matrix: Solid
Date Received: 07/02/24 08:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7846	AT	EET ALB	07/03/24 08:25
Total/NA	Analysis	8015M/D		1	8101	RA	EET ALB	07/08/24 11:54
Total/NA	Prep	5030C			7846	AT	EET ALB	07/03/24 08:25
Total/NA	Analysis	8021B		1	8102	RA	EET ALB	07/08/24 11:54
Total/NA	Prep	SHAKE			7883	DH	EET ALB	07/03/24 14:13
Total/NA	Analysis	8015M/D		1	7925	KR	EET ALB	07/05/24 10:14
Total/NA	Prep	300_Prep			7943	JT	EET ALB	07/05/24 11:52
Total/NA	Analysis	300.0		20	8013	JT	EET ALB	07/05/24 13:12

Client Sample ID: BH24-16 0.0'
Lab Sample ID: 885-7239-17
Date Collected: 06/29/24 08:30
Matrix: Solid
Date Received: 07/02/24 08:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8343	JP	EET ALB	07/12/24 12:16
Total/NA	Analysis	8015M/D		1	8408	JP	EET ALB	07/13/24 17:28
Total/NA	Prep	5030C			8343	JP	EET ALB	07/12/24 12:16
Total/NA	Analysis	8021B		1	8409	JP	EET ALB	07/13/24 17:28
Total/NA	Prep	SHAKE			8353	KR	EET ALB	07/12/24 14:53
Total/NA	Analysis	8015M/D		1	8410	KR	EET ALB	07/15/24 12:29
Total/NA	Prep	300_Prep			8431	EH	EET ALB	07/15/24 12:48
Total/NA	Analysis	300.0		20	8467	RC	EET ALB	07/15/24 16:02

Client Sample ID: BH24-16 2.0'
Lab Sample ID: 885-7239-18
Date Collected: 06/29/24 08:35
Matrix: Solid
Date Received: 07/02/24 08:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8343	JP	EET ALB	07/12/24 12:16
Total/NA	Analysis	8015M/D		1	8408	JP	EET ALB	07/13/24 17:52
Total/NA	Prep	5030C			8343	JP	EET ALB	07/12/24 12:16
Total/NA	Analysis	8021B		1	8409	JP	EET ALB	07/13/24 17:52
Total/NA	Prep	SHAKE			8353	KR	EET ALB	07/12/24 14:53
Total/NA	Analysis	8015M/D		1	8410	KR	EET ALB	07/15/24 12:40
Total/NA	Prep	300_Prep			8431	EH	EET ALB	07/15/24 12:48
Total/NA	Analysis	300.0		20	8467	RC	EET ALB	07/15/24 16:39

Client Sample ID: BH24-02 5.0'
Lab Sample ID: 885-7239-19
Date Collected: 06/29/24 10:30
Matrix: Solid
Date Received: 07/02/24 08:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7846	AT	EET ALB	07/03/24 08:25
Total/NA	Analysis	8015M/D		1	8101	RA	EET ALB	07/08/24 12:59

Lab Chronicle

Client: Vertex
Project/Site: JRU D1 1A CTB

Job ID: 885-7239-1

Client Sample ID: BH24-02 5.0'

Lab Sample ID: 885-7239-19
Matrix: Solid
Date Collected: 06/29/24 10:30
Date Received: 07/02/24 08:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7846	AT	EET ALB	07/03/24 08:25
Total/NA	Analysis	8021B		1	8102	RA	EET ALB	07/08/24 12:59
Total/NA	Prep	SHAKE			7883	DH	EET ALB	07/03/24 14:13
Total/NA	Analysis	8015M/D		1	7925	KR	EET ALB	07/05/24 10:24
Total/NA	Prep	300_Prep			7943	JT	EET ALB	07/05/24 11:52
Total/NA	Analysis	300.0		50	8052	JT	EET ALB	07/08/24 17:26

Client Sample ID: BH24-02 6.0'

Lab Sample ID: 885-7239-20
Matrix: Solid
Date Collected: 06/29/24 10:40
Date Received: 07/02/24 08:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7846	AT	EET ALB	07/03/24 08:25
Total/NA	Analysis	8015M/D		1	8101	RA	EET ALB	07/08/24 13:21
Total/NA	Prep	5030C			7846	AT	EET ALB	07/03/24 08:25
Total/NA	Analysis	8021B		1	8102	RA	EET ALB	07/08/24 13:21
Total/NA	Prep	SHAKE			7883	DH	EET ALB	07/03/24 14:13
Total/NA	Analysis	8015M/D		1	7925	KR	EET ALB	07/05/24 10:35
Total/NA	Prep	300_Prep			7943	JT	EET ALB	07/05/24 11:52
Total/NA	Analysis	300.0		50	8052	JT	EET ALB	07/08/24 17:39

Client Sample ID: BH24-02 7.0'

Lab Sample ID: 885-7239-21
Matrix: Solid
Date Collected: 06/29/24 11:30
Date Received: 07/02/24 08:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7846	AT	EET ALB	07/03/24 08:25
Total/NA	Analysis	8015M/D		1	8101	RA	EET ALB	07/08/24 13:43
Total/NA	Prep	5030C			7846	AT	EET ALB	07/03/24 08:25
Total/NA	Analysis	8021B		1	8102	RA	EET ALB	07/08/24 13:43
Total/NA	Prep	SHAKE			7883	DH	EET ALB	07/03/24 14:13
Total/NA	Analysis	8015M/D		1	7925	KR	EET ALB	07/05/24 10:46
Total/NA	Prep	300_Prep			7943	JT	EET ALB	07/05/24 11:52
Total/NA	Analysis	300.0		20	8013	JT	EET ALB	07/05/24 13:49

Client Sample ID: BH24-02 8.0'

Lab Sample ID: 885-7239-22
Matrix: Solid
Date Collected: 06/29/24 11:40
Date Received: 07/02/24 08:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			7846	AT	EET ALB	07/03/24 08:25
Total/NA	Analysis	8015M/D		1	8101	RA	EET ALB	07/08/24 14:04
Total/NA	Prep	5030C			7846	AT	EET ALB	07/03/24 08:25
Total/NA	Analysis	8021B		1	8102	RA	EET ALB	07/08/24 14:04

Lab Chronicle

Client: Vertex
Project/Site: JRU D1 1A CTB

Job ID: 885-7239-1

Client Sample ID: BH24-02 8.0'
Date Collected: 06/29/24 11:40
Date Received: 07/02/24 08:03

Lab Sample ID: 885-7239-22
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	SHAKE			7883	DH	EET ALB	07/03/24 14:13
Total/NA	Analysis	8015M/D		1	7925	KR	EET ALB	07/05/24 10:56
Total/NA	Prep	300_Prep			7943	JT	EET ALB	07/05/24 11:52
Total/NA	Analysis	300.0		20	8013	JT	EET ALB	07/05/24 14:01

Laboratory References:

EET ALB = Eurofins Albuquerque, 4901 Hawkins NE, Albuquerque, NM 87109, TEL (505)345-3975

Accreditation/Certification Summary

Client: Vertex
Job ID: 885-7239-1
Project/Site: JRU D1 1A CTB

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 Energy)

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:
☑ Standard ☐ Rush 5-day

Project Name: JRU D1 1A CTB

Project #: 23E-04616

Project Manager: Sally Carttar

Sampler: AL

On Ice: ☑ Yes ☐ No

# of Coolers: 1 (Yoai)

Cooler Temp(Including CF): 0.7+0.1=0.6 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironment.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

885-7239 COC

1/2

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)
6.28.24	0835	Soil	BH24-09 0.0'	4oz	ICE	1										
	0840		BH24-09 2.0'			2										
	0845		BH24-10 0.0'			3										
	0850		BH24-10 2.0'			4										
	0900		BH24-11 0.0'			5										
	0905		BH24-11 2.0'			6										
	0915		BH24-12 0.0'			7										
	0920		BH24-12 2.0'			8										
	1300		BH24-13 0.0'			9										
	1310		BH24-13 2.0'			10										
	1320		BH24-14 0.0'			11										
	1330		BH24-14 2.0'			12										

Date	Time	Relinquished by	Received by	Via	Date	Time
					7/1/24	1000
7/1/24	1900					

Date	Time	Relinquished by	Received by	Via	Date	Time
					7/2/24	8:03

Remarks: Bill direct to XTO Energy
nAPP2411739118
Cost Center # 1082151001
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.

Chain-of-Custody Record

Client: Vertex (XTO Energy)

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:
☐ Standard ☒ Rush 5-day

Project Name: JRU D1 1A CTB

Project #: 23E-04616

Project Manager: Sally Carttar

Sampler: AL

On Ice: ☒ Yes ☐ No

# of Coolers: 1 40ml

Cooler Temp(including CF): 0.7-0.1=0.6 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109 2/2
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)
6.29.24	0800	Soil	BH24-02 4.0'	4oz	ICE	13										
	0810		BH24-07 4.0'			14										
	0815		BH24-15 0.0'	*Hold*		15										
	0820		BH24-15 2.0'	*Hold*		16										
	0830		BH24-16 0.0'	*Hold*		17										
	0835		BH24-16 2.0'	*Hold*		18										
	1030		BH24-02 5.0'			19										
	1040		BH24-02 6.0'			20										
	1130		BH24-02 7.0'			21										
	1140		BH24-02 8.0'			22										

Date	Time	Relinquished by:	Received by	Via	Date	Time
					7/1/24	1000
Date: 7/1/24	Time: 1900	Relinquished by	Received by:	Via: courier	Date: 7/2/24	Time: 8:03

Remarks: Bill direct to XTO Energy
nAPP2411739118
cost center # 10821510001
cc: scarttar@vertex.ca ALudvik@vertexca

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: 885-7239-1

Login Number: 7239 **List Source: Eurofins Albuquerque**
List Number: 1
Creator: McQuiston, Steven

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").	True	

ATTACHMENT 6

Location:	JRU DI 1A Battery	
Spill Date:	4/9/2024	
Area 1		
Approximate Area =	816.00	sq. ft.
Average Saturation (or depth) of spill =	8.00	inches
Average Porosity Factor =	0.15	
VOLUME OF LEAK		
Total Crude Oil =	0.00	bbls
Total Produced Water =	14.53	bbls
TOTAL VOLUME OF LEAK		
Total Crude Oil =	**0.00**	**bbls**
Total Produced Water =	**14.53**	**bbls**
TOTAL VOLUME RECOVERED		
Total Crude Oil =	**0.00**	**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

QUESTIONS

Action 338029

QUESTIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 338029
	Action Type: [C-141] Initial C-141 (C-141-v-Initial)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAPP2411739118**
Incident Name	**NAPP2411739118 JRU DI 1A BATTERY @ 0**
Incident Type	**Produced Water Release**
Incident Status	**Initial C-141 Received**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	JRU DI 1A BATTERY
Date Release Discovered	04/09/2024
Surface Owner	Federal

Incident Details	
Please answer all the questions in this group.	
Incident Type	Produced Water Release
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.	
Crude Oil Released (bbls) Details	*Not answered.*
Produced Water Released (bbls) Details	Cause: Corrosion | Pipeline (Any) | Produced Water | Released: 15 BBL | Recovered: 0 BBL | Lost: 15 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	Yes
Condensate Released (bbls) Details	*Not answered.*
Natural Gas Vented (Mcf) Details	*Not answered.*
Natural Gas Flared (Mcf) Details	*Not answered.*
Other Released Details	*Not answered.*
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	*Not answered.*

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 (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 338029
	Action Type: [C-141] Initial C-141 (C-141-v-Initial)

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: Alan Romero Title: Regulatory Analyst Email: alan.romero1@exxonmobil.com Date: 04/26/2024

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 (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 338029
	Action Type: [C-141] Initial C-141 (C-141-v-Initial)

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)	*Not answered.*
What method was used to determine the depth to ground water	*Not answered.*
Did this release impact groundwater or surface water	*Not answered.*
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	*Not answered.*
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	*Not answered.*
An occupied permanent residence, school, hospital, institution, or church	*Not answered.*
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	*Not answered.*
Any other fresh water well or spring	*Not answered.*
Incorporated municipal boundaries or a defined municipal fresh water well field	*Not answered.*
A wetland	*Not answered.*
A subsurface mine	*Not answered.*
An (non-karst) unstable area	*Not answered.*
Categorize the risk of this well / site being in a karst geology	*Not answered.*
A 100-year floodplain	*Not answered.*
Did the release impact areas not on an exploration, development, production, or storage site	*Not answered.*

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	No
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.	

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: 338029
	Action Type: [C-141] Initial C-141 (C-141-v-Initial)

CONDITIONS

Created By	Condition	Condition Date
scwells	None	4/26/2024

ENSOLUM

APPENDIX B

Referenced Well Records

WELL PLUGGING PLAN OF OPERATIONS

NOTE: A Well Plugging Plan of Operations shall be filed with and accepted by the Office of the State Engineer prior to plugging.

I. FILING FEE: There is no filing fee for this form.

II. GENERAL / WELL OWNERSHIP:

Existing Office of the State Engineer POD Number (Well Number) for well to be plugged: C 01916

Name of well owner: BOPCO L.P.

Mailing address: P.O. Box 2760

City: Midland State: Texas Zip code: 79702

Phone number: 432- 556 -8730 E-mail: TASavoie@Basspet.com

III. WELL DRILLER INFORMATION:

Well Driller contracted to provide plugging services: Straub Corporation – Raymond Straub

New Mexico Well Driller License No.: WD-1478 Expiration Date: June-2013

IV. WELL INFORMATION:

Note: A copy of the existing Well Record for the well to be plugged should be attached to this plan.

STATE ENGINEER OFFICE ROSWELL 2013 APR -1 P 1:19

1) GPS Well Location: Latitude: 32 deg, 22 min, 54.42 sec
Longitude: -103 deg, 53 min, 00.57 sec, NAD 83

2) Reason(s) for plugging well: Water well is in the path of new construction. Water quality is below useable quality.

3) Was well used for any type of monitoring program? NO If yes, please use section VII of this form to detail what hydrogeologic parameters were monitored. If the well was used to monitor contaminated or poor quality water, authorization from the New Mexico Environment Department may be required prior to plugging.

4) Does the well tap brackish, saline, or otherwise poor quality water? YES If yes, provide additional detail, including analytical results and/or laboratory report(s): See Attachments

5) Static water level: ~ 110 feet below land surface / feet above land surface (circle one)

6) Depth of the well: 188 feet

C-1916
4167710

7) Inside diameter of innermost casing: 5 inches.

8) Casing material: Steel

9) The well was constructed with:

UNKWN an open-hole production interval, state the open interval: _____

UNKWN a well screen or perforated pipe, state the screened interval(s): _____

10) What annular interval surrounding the artesian casing of this well is cement-grouted? NA

11) Was the well built with surface casing? UNKWN If yes, is the annulus surrounding the surface casing grouted or otherwise sealed? _____ If yes, please describe: _____

12) Has all pumping equipment and associated piping been removed from the well? yes If not, describe remaining equipment and intentions to remove prior to plugging in Section VII of this form.

V. DESCRIPTION OF PLANNED WELL PLUGGING:

Note: If this plan proposes to plug an artesian well in a way other than with cement grout, placed bottom to top with a tremie pipe, a detailed diagram of the well showing proposed final plugged configuration shall be attached, as well as any additional technical information, such as geophysical logs, that are necessary to adequately describe the proposal.

1) Describe the method by which cement grout shall be placed in the well, or describe requested plugging methodology proposed for the well: The casing will be cut off below ground surface. A tremie line will be install and a Portland Type II/ V Cement grout will be placed from the bottom to within 5' of the surface. A concrete cap will be placed from 5' to 1' and the remainder will be filled with soil.

2) Will well head be cut-off below land surface after plugging? yes

VI. PLUGGING AND SEALING MATERIALS:

Note: The plugging of a well that taps poor quality water may require the use of a specialty cement or specialty sealant

1) For plugging intervals that employ cement grout, complete and attach Table A.

2) For plugging intervals that will employ approved non-cement based sealant(s), complete and attach Table B.

3) Theoretical volume of grout required to plug the well to land surface: 20 Sacks

4) Type of Cement proposed: See Attached Conditions of Approval C.6
5% Fullers Earth / Type II/V Cement
See Attached Conditions of Approval C.6

5) Proposed cement grout mix: 8 gallons of water per 94 pound sack of Portland cement.

6) Will the grout be: _____ batch-mixed and delivered to the site

X mixed on site

7) Grout additives requested, and percent by dry weight relative to cement: Salt water gel – The use of Fuller's Earth is to help with leak-off to the formation. Since the formation water is high in chlorides, Volclay Sodium Bentonite will not be acceptable. 5 LBS. of Gel per 94 LBS. of cement

SEE Attached Conditions of Approval C.G.

8) Additional notes and calculations: ((dia.^{2} * 0.005454)*Depth)/ 1.25 cuft-bag

VII. ADDITIONAL INFORMATION: List additional information below, or on separate sheet(s):

The Public Land Survey is Section 21, Township 22 South, Range 30 East.

VIII. SIGNATURE:

I, Raymond L Straub Jr., P.G. , say that I have carefully read the foregoing Well Plugging Plan of Operations and any attachments, which are a part hereof; that I am familiar with the rules and regulations of the State Engineer pertaining to the plugging of wells and will comply with them, and that each and all of the statements in the Well Plugging Plan of Operations and attachments are true to the best of my knowledge and belief.

Signature of Applicant

03/28/2013
Date

IX. ACTION OF THE STATE ENGINEER:

This Well Plugging Plan of Operations is:

✓ Approved subject to the attached conditions.
____ Not approved for the reasons provided on the attached letter.

Witness my hand and official seal this 11th day of April, 13

Scott A. Verhines, State Engineer

By: Tim Williams

Tim Williams
Carlsbad Basin Watermaster

STATE ENGINEER OFFICE
ROSWELL, NM
2013 APR -1 P 1:19

TABLE A - For plugging intervals that employ cement grout. Start with deepest interval.

	Interval 1 – deepest	Interval 2	Interval 3 – most shallow
			Note: if the well is non-artesian and breaches only one aquifer, use only this column.
Top of proposed interval of grout placement (ft bgl)			5 feet
Bottom of proposed interval of grout placement (ft bgl)			188 feet
Theoretical volume of grout required per interval (gallons)			20 Sacks
Proposed cement grout mix gallons of water per 94-lb. sack of Portland cement			8 gallons
Mixed on-site or batch-mixed and delivered?			On-site
Grout additive 1 requested			5% Saltwater Bentonite
Additive 1 percent by dry weight relative to cement			5 LBS.
Grout additive 2 requested			
Additive 2 percent by dry weight relative to cement			

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
2013 APR -1 P 1:19

TABLE B - For plugging intervals that will employ approved non-cement based sealant(s). Start with deepest interval.

	Interval 1 – deepest	Interval 2	Interval 3 – most shallow
			Note: if the well is non-artesian and breaches only one aquifer, use only this column.
Top of proposed interval of sealant placement (ft bgl)			
Bottom of proposed sealant of grout placement (ft bgl)			
Theoretical volume of sealant required per interval (gallons)			
Proposed abandonment sealant (manufacturer and trade name)			

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
2013 APR -1 P 1:19

STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER
ROSWELL

Scott A. Verhines, P.E.
State Engineer

DISTRICT II
1900 West Second St.
Roswell, New Mexico 88201
Phone: (575) 622-6521
Fax: (575) 623-8559

April 17, 2013

BOPCO, L.P.
P.O. Box 2760
Midland, Texas 79702

RE: *Well Plugging Plan of Operations* for C-1916

Greetings:

Enclosed is your copy of the Well Plugging Plan for the above referenced project. The attached Conditions of Approval modify your Plan in accordance with the Rules and Regulations Governing Well Driller Licensing; Construction, Repair and Plugging of Wells 19.27.4 NMAC adopted August 31, 2005 by the State Engineer. Should you have any questions about the Plan or Conditions of Approval please do not hesitate to contact our office.

Sincerely,

Catherine Goetz
Water Resource Specialist
District II Office of the State Engineer

Enclosures

cc: Office of the State Engineer Santa Fe
Straub Corporation

Analytical Laboratory Report for:
BOPCO

Account Representative:
Willis Mossman

Production Water Analysis

Listed below please find water analysis report from: **Perry R Bass Wsw, WATER SUPPLY WELL**

Lab Test Number	Sample Date
201301003615	02/13/2013

Specific Gravity:	1.100
TDS:	153402
pH:	6.65

Cations	mg/L
Calcium as Ca^{++}	2669
Magnesium as Mg^{++}	2188
Sodium as Na^{+}	52812
Iron as Fe^{++}	9.49
Potassium as K^{+}	7466.0
Barium as Ba^{++}	0.28
Strontium as Sr^{++}	86.46
Manganese as Mn^{++}	0.46

Anions	mg/L
Bicarbonate as HCO_3^{-}	171
Sulfate as $SO_4^{=}$	6500
Chloride as Cl^{-}	81500

Gases	mg/L
Carbon Dioxide as CO_2	30
Hydrogen Sulfide as H_2S	0.0

Lab Comments:
SURFACE TEMP.=65.7°F

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
2013 APR -1 P 1:19

Analytical Laboratory Report for:
BOPCO

Account Representative:
Willis Mossman

DownHole SAT™ Scale Prediction @ 250 deg. F

Lab Test Number	Sample Date	Location
201301003615	02/13/2013	WATER SUPPLY WELL

Mineral Scale	Saturation Index	Momentary Excess (lbs/1000 bbls)
Calcite (CaCO3)	0.46	-0.05
Strontianite (SrCO3)	0.00	-25.80
Anhydrite (CaSO4)	6.85	1699.09
Gypsum (CaSO4*2H2O)	1.55	710.25
Barite (BaSO4)	0.07	-6.67
Celestite (SrSO4)	0.23	-487.80
Siderite (FeCO3)	3.44	0.04
Halite (NaCl)	0.04	-545840.63
Iron sulfide (FeS)	0.00	-1.34

Interpretation of DHSat Results:
The Saturation Index is calculated for each mineral species independently and is a measure of the degree of supersaturation (driving force for precipitation) under the conditions modeled. This value ranges from 0 to infinity with 1.0 representing a condition of equilibrium where scale will neither dissolve nor precipitate. Values less than 1.0 are undersaturated and values greater than 1.0 are supersaturated. The Momentary excess is a measure of how much scale would have to precipitate to bring the system back to a non-scaling condition. This value ranges from negative (dissolving) to positive (precipitating) values. The Momentary Excess represents the amount of scale possible while the Saturation Level represents the probability that scale will form.

New Mexico Office of the State Engineer
Transaction Summary

72121 All Applications Under Statute 72-12-1

Transaction Number: 199433 **Transaction Desc:** C 01916 **File Date:** 07/31/1980

Primary Status: EXP Expired Permit
Secondary Status: EXP Expired
Person Assigned: mvigil
Applicant: PERRY R. BASS

Events

Date	Type	Description	Comment	Processed By
07/31/1980	APP	Application Received	*	mvigil
08/04/1980	FIN	Final Action on application		mvigil
08/04/1980	WAP	General Approval Letter		mvigil
09/01/1981	EXP	Expired Permit (well log late)		mvigil

Change To:

WR File Nbr	Acres	Diversion	Consumptive	Purpose of Use
C 01916		3		PRO 72-12-1 PROSPECTING OR DEVELOPMENT OF NATURAL RESOURCE

****Point of Diversion**

C 01916	605068	3582947*	

*An (*) after northing value indicates UTM location was derived from PLSS - see Help

Remarks

WATER SUPPLY WELL FOR THE DRILLING OF JAMES RANCH UNIT #12.

STATE ENGINEER OFFICE ROSWELL, NEW MEXICO 2013 APR -1 P 1:19

Conditions

3 Appropriation and use of water under this permit shall not exceed a period of one year from the date of approval.

5A A totalizing meter shall be installed before the first branch of the discharge line from the well and the installation shall be acceptable to the State Engineer; the Engineer shall be advised of the make, model, serial number, date of installation, and initial reading of the meter prior to appropriation of water; pumping records shall be submitted to the District Supervisor for each calendar month on or before the 10th day of the following month.

6 The well shall be plugged upon completion of the permitted use, and a plugging report shall be filed with the State Engineer within 10 days.

Action of the State Engineer

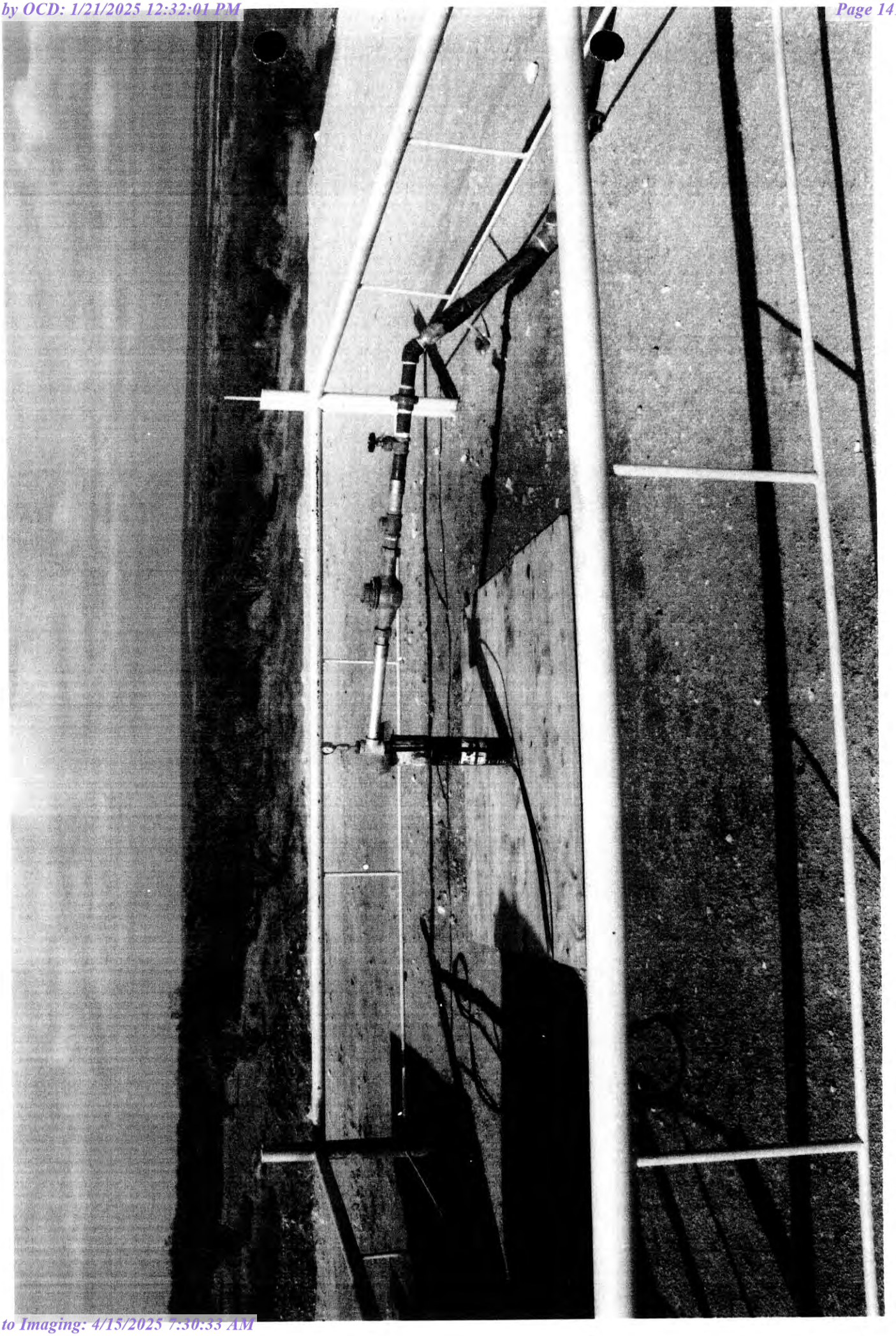
Approval Code: A - Approved
Action Date: 08/04/1980
Log Due Date: 08/31/1981
State Engineer:

Conditions of Approval for C-1916 abandonment:

1) Plugging operations will be conducted in accordance with NMED, NMOCD, or other State or Federal agency having oversight for the above described project.

2) The well shall be plugged using a cement slurry (5.2 gals water per 94lb bag of Portland cement). It is understood that due to the high sulfate content Type V cement will be used as the data provided on water quality indicates 6,500 ppm sulfates. The cement grout will be pumped via tremie line from bottom up.

3) By item 2 above, the plan meets OSE requirements for tremie/grout abandonment, however, well records are not available to confirm well design/annular seals.



ENSOLUM

APPENDIX C

Lithologic Soil Sampling Logs

ENSOLUM

	Sample Name: BH01	Date: 12/02/2024
	Site Name: JRU DI 1A Battery	
	Incident Number: nAPP241173918	
	Job Number: 03C1558574	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: JDB	Method: Hand Auger
Coordinates: 32.379992, -103.886736	Hole Diameter: 3"	Total Depth: 9'

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0	CCHE	
D	6227.2	-	N	BH01	1	1		(0-1') CALICHE, sandy, no odor
							SP	
D	6227.2	3.4	N			2		(0-8') SAND, red brown with silt and clay, poorly graded, non-cohesive, coarse sand/ small gravel of gypsum crystals, no odor.
D	2296	3.4	N			3		
D	2296	1.6	N			4		
D	1366	1.9	N			5		
D	3589.6	1.6	N			6		
D	918.4	-	N			7		
D	638.4	0.8	N			8		
							SP	
D	464.8	1.1	N	BH01A	9	9		(9') SAND, red brown with silt and clay, poorly graded, non-cohesive, coarse sand and sygnifacntly less gypsum crystals, no odor.

Total Depth @ 9 feet bgs

ENSOLUM

	Sample Name: BH02	Date: 12/02/2024
	Site Name: JRU DI 1A Battery	
	Incident Number: nAPP241173918	
	Job Number: 03C1558574	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: JDB	Method: Hand Auger
Coordinates: 32.379914, -103.886747	Hole Diameter: 3"	Total Depth: 4'

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0	SP	
D	9273.6	-	N	BH02	1	1		(0-4') SAND, red brown with silt and clay gypsum crystals coarse gravel, no odor.
D	3589.6	-	N			2		
D	1080.8	1.1	N			3		
D	414.4	0.5	N	BH02A	4	4		
Total Depth @ 4 feet bgs								

ENSOLUM

APPENDIX D

Photographic Log

ENSOLUM

Photographic Log
XTO Energy, Inc
James Ranch Unit DI 1A Battery
nAPP2411739118

Photograph: 1 Date: 06/27/2024
Description: Release extent area.
View: South

Photograph: 2 Date: 11/21/2024
Description: Release extent/deferral area.
View: Southeast

Photograph: 3 Date: 11/21/2024
Description: Excavation extent near FS04.
View: Southeast

Photograph: 4 Date: 12/02/2024
Description: Delineation activities, BH01.
View: East

ENSOLUM

Photographic Log
XTO Energy, Inc.
James Ranch Unit DI 1A Battery
nAPP2411739118

Photograph: 5 Date: 12/02/2024
Description: Site conditions near FS10.
View: Northeast

Photograph: 6 Date: 12/02/2024
Description: Deferral area.
View: East

ENSOLUM

APPENDIX E

Laboratory Analytical Reports & Chain of Custody Documentation

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

December 04, 2024

TRACY HILLARD

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: JRU DI 1A BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 12/03/24 13:49.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
TRACY HILLARD
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	12/03/2024	Sampling Date:	12/02/2024
Reported:	12/04/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558574	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.37996-103.88669		

Sample ID: BH 01 1' (H247333-01)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/03/2024	ND	2.05	103	2.00	2.99	
Toluene*	<0.050	0.050	12/03/2024	ND	2.11	106	2.00	3.00	
Ethylbenzene*	<0.050	0.050	12/03/2024	ND	2.10	105	2.00	2.88	
Total Xylenes*	<0.150	0.150	12/03/2024	ND	6.25	104	6.00	2.85	
Total BTEX	<0.300	0.300	12/03/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: KV

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**4080**	16.0	12/04/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/03/2024	ND	199	99.4	200	2.68	
DRO >C10-C28*	<10.0	10.0	12/03/2024	ND	182	91.1	200	5.38	
EXT DRO >C28-C36	<10.0	10.0	12/03/2024	ND					

Surrogate: 1-Chlorooctane *101 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *116 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
TRACY HILLARD
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	12/03/2024	Sampling Date:	12/02/2024
Reported:	12/04/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558574	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.37996-103.88669		

Sample ID: BH 01A 9' (H247333-02)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/03/2024	ND	2.05	103	2.00	2.99	
Toluene*	<0.050	0.050	12/03/2024	ND	2.11	106	2.00	3.00	
Ethylbenzene*	<0.050	0.050	12/03/2024	ND	2.10	105	2.00	2.88	
Total Xylenes*	<0.150	0.150	12/03/2024	ND	6.25	104	6.00	2.85	
Total BTEX	<0.300	0.300	12/03/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: KV

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**384**	16.0	12/04/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/03/2024	ND	199	99.4	200	2.68	
DRO >C10-C28*	<10.0	10.0	12/03/2024	ND	182	91.1	200	5.38	
EXT DRO >C28-C36	<10.0	10.0	12/03/2024	ND					

Surrogate: 1-Chlorooctane *97.1 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *111 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
TRACY HILLARD
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	12/03/2024	Sampling Date:	12/02/2024
Reported:	12/04/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558574	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.37996-103.88669		

Sample ID: BH 02 1' (H247333-03)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/03/2024	ND	2.05	103	2.00	2.99	
Toluene*	<0.050	0.050	12/03/2024	ND	2.11	106	2.00	3.00	
Ethylbenzene*	<0.050	0.050	12/03/2024	ND	2.10	105	2.00	2.88	
Total Xylenes*	<0.150	0.150	12/03/2024	ND	6.25	104	6.00	2.85	
Total BTEX	<0.300	0.300	12/03/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: KV

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**4960**	16.0	12/04/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/03/2024	ND	199	99.4	200	2.68	
DRO >C10-C28*	<10.0	10.0	12/03/2024	ND	182	91.1	200	5.38	
EXT DRO >C28-C36	<10.0	10.0	12/03/2024	ND					

Surrogate: 1-Chlorooctane *101 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *116 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
TRACY HILLARD
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	12/03/2024	Sampling Date:	12/02/2024
Reported:	12/04/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558574	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.37996-103.88669		

Sample ID: BH 02A 4' (H247333-04)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/03/2024	ND	2.05	103	2.00	2.99	
Toluene*	<0.050	0.050	12/03/2024	ND	2.11	106	2.00	3.00	
Ethylbenzene*	<0.050	0.050	12/03/2024	ND	2.10	105	2.00	2.88	
Total Xylenes*	<0.150	0.150	12/03/2024	ND	6.25	104	6.00	2.85	
Total BTEX	<0.300	0.300	12/03/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *102 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: KV

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**400**	16.0	12/04/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/03/2024	ND	199	99.4	200	2.68	
DRO >C10-C28*	<10.0	10.0	12/03/2024	ND	182	91.1	200	5.38	
EXT DRO >C28-C36	<10.0	10.0	12/03/2024	ND					

Surrogate: 1-Chlorooctane *104 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *118 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

1 of 1

Company Name: Ensolum, LLC		**BILL TO**	
Project Manager:		P.O. #:	
Address: 3122 National Parks Hwy		Company: XTO Energy Inc	
City: Carlsbad	State: NM Zip: 88220	Attn: Colton Brown	
Phone #: 337 257 8307	Fax #:	Address: 3104 E Green St	
Project #: 03C1558574	Project Owner: XTO	City: Carlsbad	
Project Name: JRU DI 1A Battery		State: NM Zip: 88220	
Project Location: 32,37996, -103,886669		Phone #:	
Sampler Name: Joshua Boxley		Fax #:	

FOR LAB USE ONLY Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	Chlorides	TPH	BTEX
H247333																		
1	BH01	1	G	1			X					X		12.2.24	1440	X	X	X
2	BH01A	~~3~~ 4		1			X					X			1515			
3	BH02	1		1			X					X			1418			
4	BH02A	4	G	1			X					X		12.2.24	1430	X	X	X

JAM

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequental damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By:	Date: 12-3-24	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 1349		All Results are emailed. Please provide Email address:
Relinquished By:	Date:	Received By:	~~@ensolum.com~~, TMorrissey@ensolum.com, KThomason@ensolum.com
	Time:		REMARKS: Incident: nAPP2411739118 Cost Center:

Delivered By: (Circle One)	Observed Temp. °C 0.6	Sample Condition Cool Intact	CHECKED BY: (Initials)	Turnaround Time: Standard ☐ Rush ☑	Bacteria (only) Sample Condition Cool Intact Observed Temp. °C
Sampler - UPS - Bus - Other:	Corrected Temp. °C 0.0	☑ Yes ☑ Yes ☐ No ☐ No		24 hr Thermometer ID #113 #140 Correction Factor -0.6°C TO-12/3/24	☐ Yes ☐ Yes ☐ No ☐ No Corrected Temp. °C

FORM-006 R 3.2 10/07/21

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

December 04, 2024

TACOMA MORRISSEY

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: JRU DI 1A BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 12/03/24 13:49.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C24-00112. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	12/03/2024	Sampling Date:	12/02/2024
Reported:	12/04/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558574	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.37996-103.88669		

Sample ID: FS 01 4' (H247334-01)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/03/2024	ND	2.05	103	2.00	2.99	
Toluene*	<0.050	0.050	12/03/2024	ND	2.11	106	2.00	3.00	
Ethylbenzene*	<0.050	0.050	12/03/2024	ND	2.10	105	2.00	2.88	
Total Xylenes*	<0.150	0.150	12/03/2024	ND	6.25	104	6.00	2.85	
Total BTEX	<0.300	0.300	12/03/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *103 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: KV

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**224**	16.0	12/04/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/03/2024	ND	202	101	200	3.12	
DRO >C10-C28*	<10.0	10.0	12/03/2024	ND	180	89.9	200	10.4	
EXT DRO >C28-C36	<10.0	10.0	12/03/2024	ND					

Surrogate: 1-Chlorooctane *91.5 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *88.4 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	12/03/2024	Sampling Date:	12/02/2024
Reported:	12/04/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558574	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.37996-103.88669		

Sample ID: FS 02 1' (H247334-02)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/03/2024	ND	2.05	103	2.00	2.99	
Toluene*	<0.050	0.050	12/03/2024	ND	2.11	106	2.00	3.00	
Ethylbenzene*	<0.050	0.050	12/03/2024	ND	2.10	105	2.00	2.88	
Total Xylenes*	<0.150	0.150	12/03/2024	ND	6.25	104	6.00	2.85	
Total BTEX	<0.300	0.300	12/03/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: KV

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**4000**	16.0	12/04/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/03/2024	ND	202	101	200	3.12	
DRO >C10-C28*	<10.0	10.0	12/03/2024	ND	180	89.9	200	10.4	
EXT DRO >C28-C36	<10.0	10.0	12/03/2024	ND					

Surrogate: 1-Chlorooctane *88.8 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *87.4 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	12/03/2024	Sampling Date:	12/02/2024
Reported:	12/04/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558574	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.37996-103.88669		

Sample ID: FS 03 1' (H247334-03)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/03/2024	ND	2.05	103	2.00	2.99	
Toluene*	<0.050	0.050	12/03/2024	ND	2.11	106	2.00	3.00	
Ethylbenzene*	<0.050	0.050	12/03/2024	ND	2.10	105	2.00	2.88	
Total Xylenes*	<0.150	0.150	12/03/2024	ND	6.25	104	6.00	2.85	
Total BTEX	<0.300	0.300	12/03/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: KV

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**2600**	16.0	12/04/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/03/2024	ND	202	101	200	3.12	
DRO >C10-C28*	<10.0	10.0	12/03/2024	ND	180	89.9	200	10.4	
EXT DRO >C28-C36	<10.0	10.0	12/03/2024	ND					

Surrogate: 1-Chlorooctane *98.2 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *96.5 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	12/03/2024	Sampling Date:	12/02/2024
Reported:	12/04/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558574	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.37996-103.88669		

Sample ID: FS 04 1' (H247334-04)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/04/2024	ND	2.05	103	2.00	2.99	
Toluene*	<0.050	0.050	12/04/2024	ND	2.11	106	2.00	3.00	
Ethylbenzene*	<0.050	0.050	12/04/2024	ND	2.10	105	2.00	2.88	
Total Xylenes*	<0.150	0.150	12/04/2024	ND	6.25	104	6.00	2.85	
Total BTEX	<0.300	0.300	12/04/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *102 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: KV

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**2160**	16.0	12/04/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/03/2024	ND	202	101	200	3.12	
DRO >C10-C28*	<10.0	10.0	12/03/2024	ND	180	89.9	200	10.4	
EXT DRO >C28-C36	<10.0	10.0	12/03/2024	ND					

Surrogate: 1-Chlorooctane *101 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *98.4 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	12/03/2024	Sampling Date:	12/02/2024
Reported:	12/04/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558574	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.37996-103.88669		

Sample ID: FS 05 1' (H247334-05)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/04/2024	ND	2.05	103	2.00	2.99	
Toluene*	<0.050	0.050	12/04/2024	ND	2.11	106	2.00	3.00	
Ethylbenzene*	<0.050	0.050	12/04/2024	ND	2.10	105	2.00	2.88	
Total Xylenes*	<0.150	0.150	12/04/2024	ND	6.25	104	6.00	2.85	
Total BTEX	<0.300	0.300	12/04/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *103 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: KV

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**5280**	16.0	12/04/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/03/2024	ND	202	101	200	3.12	
DRO >C10-C28*	<10.0	10.0	12/03/2024	ND	180	89.9	200	10.4	
EXT DRO >C28-C36	<10.0	10.0	12/03/2024	ND					

Surrogate: 1-Chlorooctane *92.8 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *92.5 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	12/03/2024	Sampling Date:	12/02/2024
Reported:	12/04/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558574	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.37996-103.88669		

Sample ID: FS 06 1' (H247334-06)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/04/2024	ND	2.05	103	2.00	2.99	
Toluene*	<0.050	0.050	12/04/2024	ND	2.11	106	2.00	3.00	
Ethylbenzene*	<0.050	0.050	12/04/2024	ND	2.10	105	2.00	2.88	
Total Xylenes*	<0.150	0.150	12/04/2024	ND	6.25	104	6.00	2.85	
Total BTEX	<0.300	0.300	12/04/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: KV

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**464**	16.0	12/04/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/03/2024	ND	202	101	200	3.12	
DRO >C10-C28*	<10.0	10.0	12/03/2024	ND	180	89.9	200	10.4	
EXT DRO >C28-C36	<10.0	10.0	12/03/2024	ND					

Surrogate: 1-Chlorooctane *94.2 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *94.8 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	12/03/2024	Sampling Date:	12/02/2024
Reported:	12/04/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558574	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.37996-103.88669		

Sample ID: FS 07 1' (H247334-07)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/04/2024	ND	2.05	103	2.00	2.99	
Toluene*	<0.050	0.050	12/04/2024	ND	2.11	106	2.00	3.00	
Ethylbenzene*	<0.050	0.050	12/04/2024	ND	2.10	105	2.00	2.88	
Total Xylenes*	<0.150	0.150	12/04/2024	ND	6.25	104	6.00	2.85	
Total BTEX	<0.300	0.300	12/04/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *103 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: KV

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**432**	16.0	12/04/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/03/2024	ND	202	101	200	3.12	
DRO >C10-C28*	<10.0	10.0	12/03/2024	ND	180	89.9	200	10.4	
EXT DRO >C28-C36	<10.0	10.0	12/03/2024	ND					

Surrogate: 1-Chlorooctane *94.9 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *95.4 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	12/03/2024	Sampling Date:	12/02/2024
Reported:	12/04/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558574	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.37996-103.88669		

Sample ID: FS 08 1' (H247334-08)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/03/2024	ND	2.15	108	2.00	3.54	
Toluene*	<0.050	0.050	12/03/2024	ND	2.21	110	2.00	3.76	
Ethylbenzene*	<0.050	0.050	12/03/2024	ND	2.32	116	2.00	5.26	
Total Xylenes*	<0.150	0.150	12/03/2024	ND	6.91	115	6.00	7.07	
Total BTEX	<0.300	0.300	12/03/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: KV

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**144**	16.0	12/04/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/03/2024	ND	202	101	200	3.12	
DRO >C10-C28*	<10.0	10.0	12/03/2024	ND	180	89.9	200	10.4	
EXT DRO >C28-C36	<10.0	10.0	12/03/2024	ND					

Surrogate: 1-Chlorooctane *95.9 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *96.5 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	12/03/2024	Sampling Date:	12/02/2024
Reported:	12/04/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558574	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.37996-103.88669		

Sample ID: FS 09 1' (H247334-09)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/03/2024	ND	2.15	108	2.00	3.54	
Toluene*	<0.050	0.050	12/03/2024	ND	2.21	110	2.00	3.76	
Ethylbenzene*	<0.050	0.050	12/03/2024	ND	2.32	116	2.00	5.26	
Total Xylenes*	<0.150	0.150	12/03/2024	ND	6.91	115	6.00	7.07	
Total BTEX	<0.300	0.300	12/03/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *113 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: KV

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**224**	16.0	12/04/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/03/2024	ND	202	101	200	3.12	
DRO >C10-C28*	<10.0	10.0	12/03/2024	ND	180	89.9	200	10.4	
EXT DRO >C28-C36	<10.0	10.0	12/03/2024	ND					

Surrogate: 1-Chlorooctane *97.4 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *96.7 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	12/03/2024	Sampling Date:	12/02/2024
Reported:	12/04/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558574	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.37996-103.88669		

Sample ID: FS 10 1' (H247334-10)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/03/2024	ND	2.15	108	2.00	3.54	
Toluene*	<0.050	0.050	12/03/2024	ND	2.21	110	2.00	3.76	
Ethylbenzene*	<0.050	0.050	12/03/2024	ND	2.32	116	2.00	5.26	
Total Xylenes*	<0.150	0.150	12/03/2024	ND	6.91	115	6.00	7.07	
Total BTEX	<0.300	0.300	12/03/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *107 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: KV

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**208**	16.0	12/04/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/03/2024	ND	202	101	200	3.12	
DRO >C10-C28*	<10.0	10.0	12/03/2024	ND	180	89.9	200	10.4	
EXT DRO >C28-C36	<10.0	10.0	12/03/2024	ND					

Surrogate: 1-Chlorooctane *96.5 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *96.5 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	12/03/2024	Sampling Date:	12/02/2024
Reported:	12/04/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558574	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.37996-103.88669		

Sample ID: SW 01 0-4' (H247334-11)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/03/2024	ND	2.15	108	2.00	3.54	
Toluene*	<0.050	0.050	12/03/2024	ND	2.21	110	2.00	3.76	
Ethylbenzene*	<0.050	0.050	12/03/2024	ND	2.32	116	2.00	5.26	
Total Xylenes*	<0.150	0.150	12/03/2024	ND	6.91	115	6.00	7.07	
Total BTEX	<0.300	0.300	12/03/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *106 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: KV

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**160**	16.0	12/04/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/03/2024	ND	202	101	200	3.12	
DRO >C10-C28*	<10.0	10.0	12/03/2024	ND	180	89.9	200	10.4	
EXT DRO >C28-C36	<10.0	10.0	12/03/2024	ND					

Surrogate: 1-Chlorooctane *93.7 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *93.0 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	12/03/2024	Sampling Date:	12/02/2024
Reported:	12/04/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558574	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.37996-103.88669		

Sample ID: SW 02 0-1' (H247334-12)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/03/2024	ND	2.15	108	2.00	3.54	
Toluene*	<0.050	0.050	12/03/2024	ND	2.21	110	2.00	3.76	
Ethylbenzene*	<0.050	0.050	12/03/2024	ND	2.32	116	2.00	5.26	
Total Xylenes*	<0.150	0.150	12/03/2024	ND	6.91	115	6.00	7.07	
Total BTEX	<0.300	0.300	12/03/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *109 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: KV

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**4240**	16.0	12/04/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/03/2024	ND	202	101	200	3.12	
DRO >C10-C28*	<10.0	10.0	12/03/2024	ND	180	89.9	200	10.4	
EXT DRO >C28-C36	<10.0	10.0	12/03/2024	ND					

Surrogate: 1-Chlorooctane *102 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *102 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	12/03/2024	Sampling Date:	12/02/2024
Reported:	12/04/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558574	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.37996-103.88669		

Sample ID: SW 03 0-1' (H247334-13)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/03/2024	ND	2.15	108	2.00	3.54	
Toluene*	<0.050	0.050	12/03/2024	ND	2.21	110	2.00	3.76	
Ethylbenzene*	<0.050	0.050	12/03/2024	ND	2.32	116	2.00	5.26	
Total Xylenes*	<0.150	0.150	12/03/2024	ND	6.91	115	6.00	7.07	
Total BTEX	<0.300	0.300	12/03/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: KV

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**2520**	16.0	12/04/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/03/2024	ND	202	101	200	3.12	
DRO >C10-C28*	<10.0	10.0	12/03/2024	ND	180	89.9	200	10.4	
EXT DRO >C28-C36	<10.0	10.0	12/03/2024	ND					

Surrogate: 1-Chlorooctane *93.2 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *93.3 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	12/03/2024	Sampling Date:	12/02/2024
Reported:	12/04/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558574	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.37996-103.88669		

Sample ID: SW 04 0-1' (H247334-14)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/03/2024	ND	2.15	108	2.00	3.54	
Toluene*	<0.050	0.050	12/03/2024	ND	2.21	110	2.00	3.76	
Ethylbenzene*	<0.050	0.050	12/03/2024	ND	2.32	116	2.00	5.26	
Total Xylenes*	<0.150	0.150	12/03/2024	ND	6.91	115	6.00	7.07	
Total BTEX	<0.300	0.300	12/03/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *111 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: KV

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**7120**	16.0	12/04/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/04/2024	ND	202	101	200	3.12	
DRO >C10-C28*	<10.0	10.0	12/04/2024	ND	180	89.9	200	10.4	
EXT DRO >C28-C36	<10.0	10.0	12/04/2024	ND					

Surrogate: 1-Chlorooctane *99.0 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *99.4 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	12/03/2024	Sampling Date:	12/02/2024
Reported:	12/04/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558574	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.37996-103.88669		

Sample ID: SW 05 0-1' (H247334-15)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/03/2024	ND	2.15	108	2.00	3.54	
Toluene*	<0.050	0.050	12/03/2024	ND	2.21	110	2.00	3.76	
Ethylbenzene*	<0.050	0.050	12/03/2024	ND	2.32	116	2.00	5.26	
Total Xylenes*	<0.150	0.150	12/03/2024	ND	6.91	115	6.00	7.07	
Total BTEX	<0.300	0.300	12/03/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *103 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: KV

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**5440**	16.0	12/04/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/04/2024	ND	202	101	200	3.12	
DRO >C10-C28*	<10.0	10.0	12/04/2024	ND	180	89.9	200	10.4	
EXT DRO >C28-C36	<10.0	10.0	12/04/2024	ND					

Surrogate: 1-Chlorooctane *86.5 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *87.8 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	12/03/2024	Sampling Date:	12/02/2024
Reported:	12/04/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558574	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.37996-103.88669		

Sample ID: SW 06 0-1' (H247334-16)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/03/2024	ND	2.15	108	2.00	3.54	
Toluene*	<0.050	0.050	12/03/2024	ND	2.21	110	2.00	3.76	
Ethylbenzene*	<0.050	0.050	12/03/2024	ND	2.32	116	2.00	5.26	
Total Xylenes*	<0.150	0.150	12/03/2024	ND	6.91	115	6.00	7.07	
Total BTEX	<0.300	0.300	12/03/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *110 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: CT

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**176**	16.0	12/04/2024	ND	464	116	400	3.51	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/04/2024	ND	202	101	200	3.12	
DRO >C10-C28*	<10.0	10.0	12/04/2024	ND	180	89.9	200	10.4	
EXT DRO >C28-C36	<10.0	10.0	12/04/2024	ND					

Surrogate: 1-Chlorooctane *86.0 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *85.4 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	12/03/2024	Sampling Date:	12/02/2024
Reported:	12/04/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558574	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.37996-103.88669		

Sample ID: SW 07 0-1' (H247334-17)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/03/2024	ND	2.15	108	2.00	3.54	
Toluene*	<0.050	0.050	12/03/2024	ND	2.21	110	2.00	3.76	
Ethylbenzene*	<0.050	0.050	12/03/2024	ND	2.32	116	2.00	5.26	
Total Xylenes*	<0.150	0.150	12/03/2024	ND	6.91	115	6.00	7.07	
Total BTEX	<0.300	0.300	12/03/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *103 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: CT

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**208**	16.0	12/04/2024	ND	464	116	400	3.51	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/04/2024	ND	202	101	200	3.12	
DRO >C10-C28*	<10.0	10.0	12/04/2024	ND	180	89.9	200	10.4	
EXT DRO >C28-C36	<10.0	10.0	12/04/2024	ND					

Surrogate: 1-Chlorooctane *79.6 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *79.2 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	12/03/2024	Sampling Date:	12/02/2024
Reported:	12/04/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558574	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.37996-103.88669		

Sample ID: SW 08 0-1' (H247334-18)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/04/2024	ND	2.15	108	2.00	3.54	
Toluene*	<0.050	0.050	12/04/2024	ND	2.21	110	2.00	3.76	
Ethylbenzene*	<0.050	0.050	12/04/2024	ND	2.32	116	2.00	5.26	
Total Xylenes*	<0.150	0.150	12/04/2024	ND	6.91	115	6.00	7.07	
Total BTEX	<0.300	0.300	12/04/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *109 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: CT

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**160**	16.0	12/04/2024	ND	464	116	400	3.51	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/04/2024	ND	202	101	200	3.12	
DRO >C10-C28*	<10.0	10.0	12/04/2024	ND	180	89.9	200	10.4	
EXT DRO >C28-C36	<10.0	10.0	12/04/2024	ND					

Surrogate: 1-Chlorooctane *91.6 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *91.4 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	12/03/2024	Sampling Date:	12/02/2024
Reported:	12/04/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558574	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.37996-103.88669		

Sample ID: SW 09 0-1' (H247334-19)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/04/2024	ND	2.15	108	2.00	3.54	
Toluene*	<0.050	0.050	12/04/2024	ND	2.21	110	2.00	3.76	
Ethylbenzene*	<0.050	0.050	12/04/2024	ND	2.32	116	2.00	5.26	
Total Xylenes*	<0.150	0.150	12/04/2024	ND	6.91	115	6.00	7.07	
Total BTEX	<0.300	0.300	12/04/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *104 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: CT

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**240**	16.0	12/04/2024	ND	464	116	400	3.51	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/04/2024	ND	202	101	200	3.12	
DRO >C10-C28*	<10.0	10.0	12/04/2024	ND	180	89.9	200	10.4	
EXT DRO >C28-C36	<10.0	10.0	12/04/2024	ND					

Surrogate: 1-Chlorooctane *85.6 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *85.4 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ENSOLUM
TACOMA MORRISSEY
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	12/03/2024	Sampling Date:	12/02/2024
Reported:	12/04/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A BATTERY	Sampling Condition:	Cool & Intact
Project Number:	03C1558574	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.37996-103.88669		

Sample ID: SW 10 0-1' (H247334-20)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/04/2024	ND	2.15	108	2.00	3.54	
Toluene*	<0.050	0.050	12/04/2024	ND	2.21	110	2.00	3.76	
Ethylbenzene*	<0.050	0.050	12/04/2024	ND	2.32	116	2.00	5.26	
Total Xylenes*	<0.150	0.150	12/04/2024	ND	6.91	115	6.00	7.07	
Total BTEX	<0.300	0.300	12/04/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *106 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: CT

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**192**	16.0	12/04/2024	ND	464	116	400	3.51	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/04/2024	ND	202	101	200	3.12	
DRO >C10-C28*	<10.0	10.0	12/04/2024	ND	180	89.9	200	10.4	
EXT DRO >C28-C36	<10.0	10.0	12/04/2024	ND					

Surrogate: 1-Chlorooctane *83.8 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *81.9 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

1 of 2

Company Name: Ensolum, LLC	**BILL TO**
Project Manager: Tacoma Morrissey	P.O. #:
Address: 3122 National Parks Hwy	Company: XTO Energy Inc
City: Carlsbad State: NM Zip: 88220	Attn: Colton Brown
Phone #: 337 257 8307 Fax #:	Address: 3104 E Green St
Project #: 03C1558574 Project Owner: XTO	City: Carlsbad
Project Name: JRU DI 1A Battery	State: NM Zip: 88220
Project Location: 32.37996, -103.48869	Phone #:
Sampler Name: Joshua Boxley	Fax #:

FOR LAB USE ONLY

Lab I.D.: H247334

Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	Chlorides	TPH	BTEX
1	FS01	4	C	1			X					X		12.2.24	1200	X	X	X
2	~~SW~~ FS02	1													1235			
3	FS03														1245			
4	FS04														1255			
5	FS05														1308			
6	FS06														1314			
7	FS07														1322			
8	FS08														~~1325~~ 1330			
9	FS09														1334			
10	FS10	1	C	1			X					X		12.2.24	1355	X	X	X

Relinquished By:	Date: 12-3-24 Time: 1349	Received By:	
Relinquished By:	Date: Time:	Received By:	

Verbal Result: ☐ Yes ☐ No Add'l Phone #:

All Results are emailed. Please provide Email address:
~~JOS~~ @ensolum.com; TMorrissey@ensolum.com, KThomason@ensolum.com

REMARKS:
Incident: nAPP2411739116
Cost Center:

Turnaround Time: Standard ☐ Rush ☒
24 hr

Thermometer ID ~~#113~~ #140
Correction Factor -0.5°C

Delivered By: (Circle One)
Sampler - UPS - Bus - Other:

Observed Temp. °C 0.6
Corrected Temp. °C 0.0

Sample Condition: Cool ☑ Yes ☐ No; Intact ☑ Yes ☐ No

CHECKED BY: (Initials)

Bacteria (only) Sample Condition: Cool ☐ Yes ☐ No; Intact ☐ Yes ☐ No
Observed Temp. °C
Corrected Temp. °C

T° 12/3/24

FORM-006 R 3.2 10/07/21

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com

CARDINAL Laboratories

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

2 of 2

Company Name: Ensolum, LLC	**BILL TO**
Project Manager: Tacoma Morrissey	P.O. #:
Address: 3122 National Parks Hwy	Company: XTO Energy Inc
City: Carlsbad State: NM Zip: 88220	Attn: Colton Brown
Phone #: 337 257 8307 Fax #:	Address: 3104 E Green St
Project #: 03C1558574 Project Owner: XTO	City: Carlsbad
Project Name: JRU DI 2A Battery	State: NM Zip: 88220
Project Location: 32.37996, -103.88669	Phone #:
Sampler Name: Joshua Boxley	Fax #:

FOR LAB USE ONLY					MATRIX							PRESERV.			SAMPLING		ANALYSIS REQUEST														
Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	Chlorides	TPH	BTEX														
H247334																															
11	SW01	0-4	C	1			X					X		12.2.24	1220	X	X	X													
12	SW02	0-1	C	1			X					X			1240																
13	SW03														1250																
14	SW04														1300																
15	SW05														1310																
16	SW06														1317																
17	SW07														1325																
18	SW08														1334																
19	SW09														1345																
20	SW10	0-1	C	1			X					X		12.2.24	1400	X	X	X													

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By:	Date: 12-3-24	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 1349		All Results are emailed. Please provide Email address: JDS @ensolum.com, TMorrissey@ensolum.com, KThomason@ensolum.com
Relinquished By:	Date:	Received By:	REMARKS: Incident: nAPP2411739118
	Time:		Cost Center:
Delivered By: (Circle One)	Observed Temp. °C 0.6	Sample Condition Cool Intact	CHECKED BY: (Initials)
Sampler - UPS - Bus - Other:	Corrected Temp. °C 0.0	☑ Yes ☑ Yes ☐ No ☐ No	

Turnaround Time: 24hr Standard ☐ Rush ☑ Bacteria (only) Sample Condition Cool Intact Observed Temp. °C
Thermometer ID #113 #140 ☐ Yes ☐ Yes Corrected Temp. °C
Correction Factor -0.6°C ☐ No ☐ No
TO 12/3/24

FORM-006 R 3.2 10/07/21

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com

ENSOLUM

APPENDIX F

Disposal Facility Manifests

R360 ENVIRONMENTAL SOLUTIONS

NEW MEXICO NON-HAZARDOUS OILFIELD WASTE MANIFEST

(PLEASE PRINT) *REQUIRED INFORMATION*

Company Man Contact Information
Name David Byrd
Phone No.

GENERATOR

NO. HW- 717394

Generator Manifest #
Generator Name XTO
Address
City, State, Zip
Phone No.

Location of Origin
Lease/Well Name & No. JRU D1 1ACTB
County
API No. ~~30-015-55488~~ NAPP2411739118
Rig Name & No. CC:10325551001
AFE/PO No.

EXEMPT E&P Waste/Service Identification and Amount (place volume next to waste type in barrels or cubic yards)

Oil Based Muds		NON-INJECTABLE WATERS	OTHER EXEMPT E&P WASTE STREAMS
Oil Based Cuttings		Washout Water (Non-Injectable)	
Water Based Muds		Completion Fluid/Flow Back (Non-Injectable)	
Water Based Cuttings		Produced Water (Non-Injectable)	Belly dump
Produced Formation Solids		Gathering Line Water/Waste (Non-Injectable)	
Tank Bottoms	/	INTERNAL USE ONLY	TOP SOIL & CALICHE SALES
E&P Contaminated Soil		Truck Washout (exempt waste) YES NO	QUANTITY TOP SOIL CALICHE
Gas Plant Waste			

WASTE GENERATION PROCESS: ☐ DRILLING ☐ COMPLETION ☐ PRODUCTION ☐ GATHERING LINES

NON-EXEMPT E&P Waste/Service Identification and Amount
All non-exempt E&P waste must be analysed and be below threshold limits for toxicity (TCLP), Ignitability, Corrosivity adn Reactivity.

Non-Exempt Other *please select from **Non-Exempt Waste List** on back

DISPOSAL QUANTITY B - BARRELS L - LIQUID 20 Y - YARDS E - EACH

I hereby certify that the above listed material(s), is (are) not hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulation.

☑ RCRA EXEMPT: Oil field wastes generated from oil and gas exploration and production operation and are not mixed with non-exempt waste (R360 Accepts certifications on a per load basis only)

☐ RCRA NON-EXEMPT: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined by 40 CFR, part 261, subpart D, as amended. The following documentation demonstrating the waste as non-hazardous is attached. (Check the appropriate items as provided)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Other (Provide Description Below)

☐ EMERGENCY NON-OILFIELD Emergency non-hazardous, non-oilfield waste that has been ordered by the Department of Public Safety (the order, documentation of non-hazardous waste determination and a description of the waste must accompany this form)

(PRINT) AUTHORIZED AGENTS SIGNATURE | DATE | SIGNATURE

TRANSPORTER

Transporter's Name SemTex Mex
Address
Phone No.
Transporter Ticket #

Driver's Name Cornelio
Print Name
Phone No.
Truck No. 02

I hereby certify that the above named material(s) was/were picked up at the Generator's site listed above and delivered without incident to the disposal facility listed below.

SHIPMENT DATE | DRIVER'S SIGNATURE | 1/18-24 DELIVERY DATE | DRIVER'S SIGNATURE

TRUCK TIME STAMP IN: OUT:

DISPOSAL FACILITY

RECEIVING AREA Name/No. 2E

Site Name/ Permit No. **Halfway Facility / NM1-006**
Address **6601 Hobbs Hwy US 62 / 180 Mile Marker 66 Carlsbad, NM 88220**
Phone No. **575-392-6368**

NORM READINGS TAKEN? (Circle One) YES NO
If YES, was reading > 50 micro roentgents? (Circle One) YES NO
PASS THE PAINT FILTER TEST? (Circle One) YES NO

TANK BOTTOMS

	Feet	Inches
st Guage		
nd Guage		
eceived		

BS&W/BBLS Received		BS&W (%)	
Free Water			
Total Received			

hereby certify that the above load material has been (circle one): ACCEPTED DENIED If denied, why?

SL Ang NAME (PRINT) | 1/18/24 DATE | Agent TITLE | SIGNATURE

-138
onc@northstarforms.com (877)499-0492

White - R360 ORIGINAL Yellow- TRANSPORTER COPY Pink- GENERATOR SITE COPY Gold- RETURN TO GENERATOR

308.R360-5240LE rev 08/23

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

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 422854
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAPP2411739118**
Incident Name	**NAPP2411739118 JRU DI 1A BATTERY @ 0**
Incident Type	**Produced Water Release**
Incident Status	**Deferral Request Received**
Incident Facility	**[fAPP2123053722] JAMES RANCH UNIT DI1A**

Location of Release Source *Please answer all the questions in this group.*	
Site Name	JRU DI 1A BATTERY
Date Release Discovered	04/09/2024
Surface Owner	Federal

Incident Details *Please answer all the questions in this group.*	
Incident Type	Produced Water Release
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

Nature and Volume of Release *Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.*	
Crude Oil Released (bbls) Details	*Not answered.*
Produced Water Released (bbls) Details	Cause: Corrosion | Pipeline (Any) | Produced Water | Released: 15 BBL | Recovered: 0 BBL | Lost: 15 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	Yes
Condensate Released (bbls) Details	*Not answered.*
Natural Gas Vented (Mcf) Details	*Not answered.*
Natural Gas Flared (Mcf) Details	*Not answered.*
Other Released Details	*Not answered.*
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	*Not answered.*

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: 422854
	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: 01/21/2025

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: 422854
	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	OCD Imaging Records Lookup
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 500 and 1000 (ft.)
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 1 and 5 (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 100 (ft.)
Categorize the risk of this well / site being in a karst geology	High
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)	12000
TPH (GRO+DRO+MRO)	(EPA SW-846 Method 8015M)	89
GRO+DRO	(EPA SW-846 Method 8015M)	36
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		10/01/2024
On what date will (or did) the final sampling or liner inspection occur		12/31/2024
On what date will (or was) the remediation complete(d)		12/31/2024
What is the estimated surface area (in square feet) that will be reclaimed		0
What is the estimated volume (in cubic yards) that will be reclaimed		0
What is the estimated surface area (in square feet) that will be remediated		1291
What is the estimated volume (in cubic yards) that will be remediated		95
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: 422854
	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	R360 ARTESIA LLC LANDFARM [fEEM0112340644]
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	No
OR is the **off-site** disposal site, to be used, an NMED facility	No
(Ex Situ) Excavation and **on-site** remediation (i.e. On-Site Land Farms)	No
(In Situ) Soil Vapor Extraction	No
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	No
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	No
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	No
Ground Water Abatement pursuant to 19.15.30 NMAC	No
OTHER (Non-listed remedial process)	No
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: 01/21/2025
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: 422854
	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	Production equipment including horizontal separators and process piping. Removal of equipment to safely access the deferral area would require the battery to be shut down
What is the remaining surface area (in square feet) that will still need to be remediated if a deferral is granted	1760
What is the remaining volume (in cubic yards) that will still need to be remediated if a deferral is granted	320
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	JAMES RANCH UNIT DI1A [fAPP2123053722]
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: 01/21/2025

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: 422854
	Action Type: [C-141] Deferral Request C-141 (C-141-v-Deferral)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	**407027**
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	**12/06/2024**
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: 422854
	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 NAPP2411739118) until final reclamation of the well pad or major construction, whichever comes first. Ensolum 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 4 that is next to active production equipment and process piping, 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.	4/15/2025