Incident ID: NAB1810133480

Reclamation Closure and Revegetation Report

Spud 16 State #010H

Section 16, Township 23 South, Range 29 East
API 30-015-29691
County: Eddy
Vertex File Number: 23E-02857

Prepared for:

Devon Energy Production Company, LP

Prepared by:

Vertex Resource Services Inc.

Date

September 2025

Reclamation Closure and Revegetation Report
Spud 16 State #010H

Prepared for:

Devon Energy Production Company, LP

204 E Bender Road

Hobbs, New Mexico 88240

Prepared by:

Vertex Resource Services Inc.

3101 Boyd Drive

Carlsbad, New Mexico 88220

Katrina Taylor　　　　　　　　　　　September 4, 2025
_____　　　　_____
Katrina Taylor, B.Sc.　　　　　　　　　　　Date
ENVIRONMENTAL TECHNICIAN, REPORTING

Sally Carttar　　　　　　　　　　　November 17, 2025
_____　　　　_____
Sally Carttar, B.A.　　　　　　　　　　　Date
PROJECT MANAGER, REPORT REVIEW

VERSATILITY. EXPERTISE.

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Executive Summary

Devon Energy Production Company, LP (Devon) retained Vertex Resource Services Inc. (Vertex) to complete a reclamation closure for Spud 16 State #010H located on private land in Unit I, Section 16, Township 23 South, Range 29 East (hereafter referred to as "site"). Vertex conducted the final site visit on July 7, 2025, to establish a lack of surrounding vegetation and collect a backfill sample. The current condition of the release area is compliant with restoration to the original land use and has reached a vegetation level of 70% of the barren pre-disturbance area.

The incident was located in the pastureland and remediated to an approved variance of 15,000 ppm chlorides. The excavation was then backfilled with clean locally sourced material. A sample of the backfill was sent for laboratory analysis after flooding by the Salt Lake occurred. The sample was analyzed for contamination and found to be below the variance. The soil quality of the backfill was tested and compared to the soil quality in the surrounding undisturbed pastureland. The soil samples were field tested for pH, nitrogen, phosphorous, and potassium. Results showed the backfill to have higher concentrations of these nutrients.

This document provides a description of the site, summary of the previous environmental work, and details of the fulfillment of the reclamation and revegetation criteria for the incident nAB1810133480.

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1.0 Site Evaluation

The Remediation Closure Report for this incident was approved by New Mexico Oil Conservation Division (NMOCD) on April 24, 2025. The pastureland release had been previously excavated to an approved variance of 15,000 ppm chloride by Vertex (Appendix C). The site is surrounded by oil and gas production to the east and United Salt Corporation solar salt mine less than 500 ft to the west. This establishes the release area as a salt lake front.

2.0 Reclamation Compliance

2.1 Backfill Placement and Sample

The location was originally backfilled, contoured to match the surrounding landscape, and laid to minimize erosion in October 2024 upon the completion of the site's remediation. Photographs of the backfill are included in Appendix A.

A sample of the backfill was collected on July 7, 2025, and analyzed for contaminates regulated in NMAC 19.15.29.12 Table 1 by Eurofins Laboratories. Laboratory analysis of the backfill is in compliance with the variance of 15,000 ppm chloride, which was established by background samples and initially accepted for this remediation due to the proximity to the salt lake (Appendix C). The area shows signs of recent and episodic flooding from the near by salt lake, such as a soft ground and white salt crystals. This indicates the area was likely flooded post-remediation, salinating the backfill material to background conditions.

2.2 Backfill Quality in the Pastureland

A sample of the topsoil used to backfill the top 1 ft of the pastureland was analyzed for soil quality using nearby historically undisturbed pastureland as a control. The two samples were field analyzed for pH, nitrogen, phosphorous, and potassium.

The pH was evaluated using a pH indicator and categorized as alkaline, neutral, or acidic. Nutrient concentrations for nitrogen, phosphorus, and potassium were assigned qualitative rankings of very low, low, medium, or high based on optical density. These rankings were standardized by placing the vials against a white background and referencing a color chart. Additionally, visual comparisons of sample opacity were used to assess relative nutrient concentrations between the backfill and control samples.

The pH of the backfill was neutral and the pastureland was slightly alkaline making pH's comparable. The nitrogen concentration of the backfill was medium and the pastureland was very low, making the backfill more nitrogen rich. The phosphorous concentration of the both the backfill and the pastureland was low making them comparable. The potassium concentration of the backfill was low and the pastureland was very low, making the backfill more potassium rich.

This establishes the backfill to have a higher soil quality than the surrounding pastureland (Appendix B).

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3.0 Revegetation Compliance

3.1 Variance Request

On behalf of Devon, Vertex is requesting a variance for incident NAB1810133480 Spud 16 State #010H to be excluded from the reclamation rules 19.15.29.13 A&D.

> *19.15.29.13 A. The responsible party must substantially restore the impacted surface areas to the condition that existed prior to the release or their final land use. Restoration of the site must include the replacement of removed material and must be replaced to the near original relative positions and contoured to achieve erosion control, long term stability and preservation of surface water flow patterns*

> *19.15.29.13 D. Reclamation of areas no longer in use. The responsible party shall reclaim all areas disturbed by the remediation and closure, except areas reasonably needed for production operations or for subsequent drilling operations, as early and as nearly as practical to their original condition or their final land use and maintain those areas to control dust and minimize erosion to the extent practical.*

> 1. *The reclamation must contain a minimum of four feet of non-waste containing, uncontaminated, earthen material with chloride concentrations less than 600 mg/kg as analyzed by EPA Method 300.0, or other test methods approved by the division. The soil cover must include a top layer, which is either the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater.*
> 2. *The responsible party must reseed disturbed area in the first favorable growing season following closure of the site.*
> 3. *The division will consider reclamation of all disturbed areas complete when uniform vegetative cover has been established that reflects a life-form ratio of plus or minus fifty percent of pre-disturbance levels and a total percent plant cover of at least seventy percent of pre-disturbance levels, excluding noxious weeds.*
> 4. *For any major or minor release containing liquids, the responsible party must notify the division when reclamation and re-vegetation are complete.*

The variance is requested due to the conditions of the land prior to the release being barren, high salinity soil. This is established by:

1. Proximity to United Salt Corporation's Operations, a 2,000 acre salt farm founded in in 1960, which processes and provides solar salt (sun and wind naturally evaporate the water) to the market
2. High chloride impacted soil was already present in the soils before the of the produced water spill that took place on March 20, 2018 as previously established by the background samples in the remediation variance.
3. High salinity soil in the lake front area is barren and will not support vegetation as established by photographs of the surrounding areas (Appendix A)

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4. The backfilled area has already been flooded by the salt lake and salinated to background levels. Excavating the material out to place material with laboratory analysis in compliance of 19.15.29.13 D.1. would result in that material becoming contaminated shortly after. This would unnecessarily increase soil disposed of and further drain the limited resource of nutrient rich topsoil.

The variance request will provide equal protection to the groundwater:

1. Lake front areas impacted by the Salt Lake are not protected groundwater / freshwater.
2. The remediation of this incident was approved by OCD on April 24, 2025. Petroleum hydrocarbons and BTEX were fully remediated to below reclamation criteria, and chloride concentrations were remediated to background levels. Any additional vegetation growth, reseeding, or restoration activities would not alter the total contamination level of the soil. As such this variance would provide equal protection to the ground water.

3.2   Regrowth in the Pastureland

The pastureland areas of the release area are entirely void of vegetation with approximately 0% coverage; however, the surrounding pastureland is also void of vegetation due to episodic flooding of saline water creating high salinity soil. In accordance with 19.15.29.13 A, the land has been restored back to the condition that it existed prior to the release. In accordance with 19.15.29.13 D, the land has reached a vegetation level of 70% of the barren pre-release area. Requirements of further seeding or vegetation growth will be voided with the approval of the variance for 19.15.29.13 D regulations as requested in section 3.1 of this report.

4.0 Reclamation and Revegetation Closure Request

The current condition of the release area is compliant with restoration to the original land use and has reached a vegetation level of 70% of the barren pre-release area. As such Vertex requests on behalf of Devon that Reclamation Closure, Revegetation Closure, and Revegetation Variance is accepted for incident NAB1810133480.

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

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5.0 Limitations

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

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

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FIGURES

Legend:
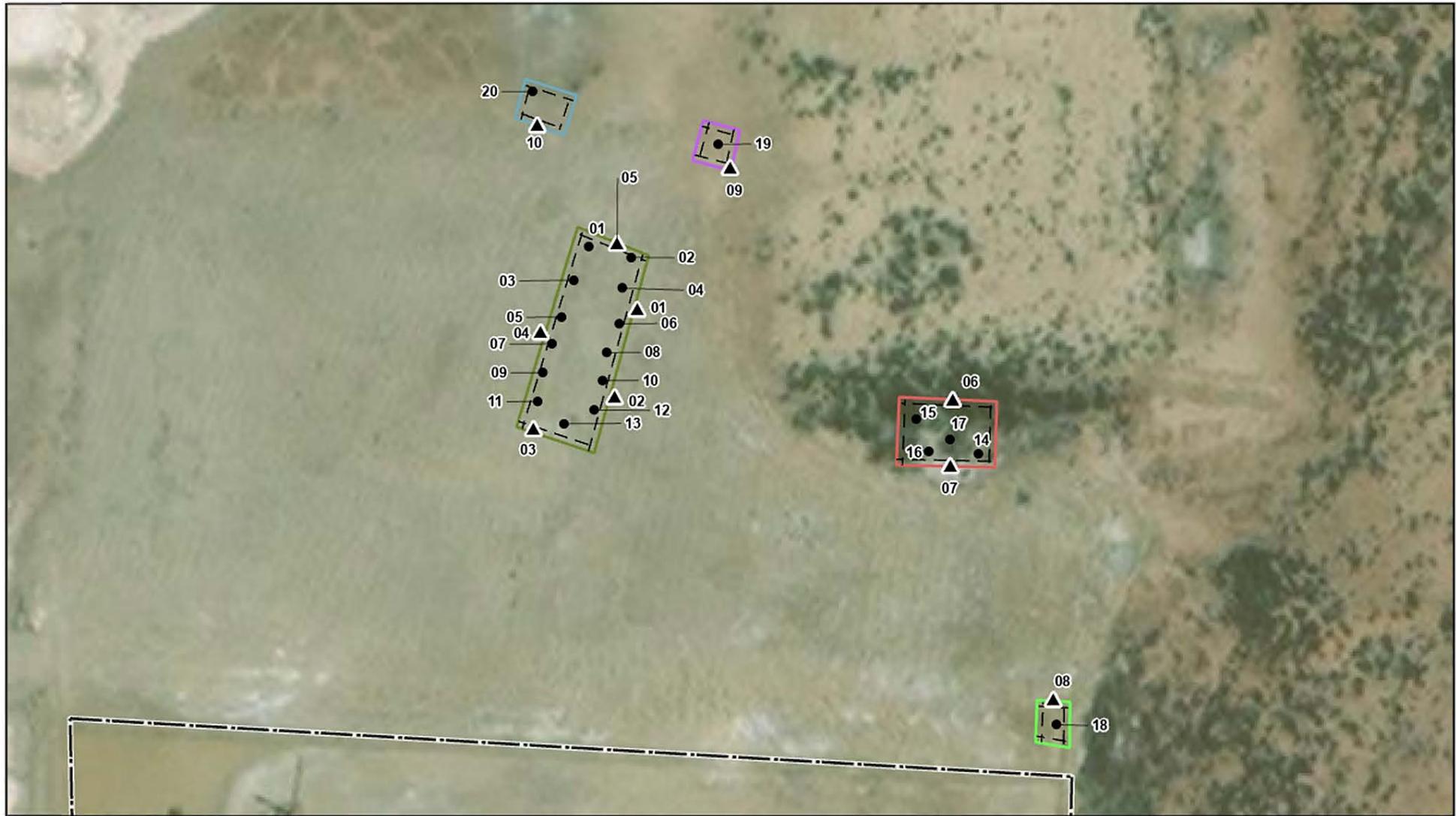
- ▲ Wall Sample (Prefixed by "WS24-")
- ● Base Sample (Prefixed by "BS24-")
- ▭ Approximate Lease Boundary
- ▭ Excavation to 1' bgs (~ 180 sq. ft | 60 ft.)
- ▭ Excavation to 1' bgs (~ 194 sq. ft | 56 ft.)
- ▭ Excavation to 1' bgs (~ 262 sq.ft | 65 ft.)
- ▭ Excavation to 1' bgs (~ 799 sq. ft | 115 ft.)
- ▭ Excavation to 4.5' bgs (~ 1,987 sq. ft | 199 ft.)

Scale: 0 — 25 — 50 ft
NAD 1983 UTM Zone 13N FT
Date: Nov 14/24
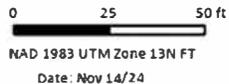
Map Center:
Lat/Long
32.304224°, -103.983134°

N

Confirmation Sampling Schematic
Spud 16 State #010H

FIGURE: 1

VERTEX · **devon**

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

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

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TABLES

Client Name: Devon Energy Production Company, LP
Site Name: Spud 16 State #010H
NMOCD Tracking #: nAB1810133480
Project #: 23E-02857
Lab Reports: 885-5200-1, 885-7515-1, 890-7167-1, E410119, 855-28666-1

Table 1. Backfill and Confirmatory Sample Laboratory Results									
Sample Description			Petroleum Hydrocarbons						Inorganic
			Volatile		Extractable				
Sample ID	Depth (ft)	Sample Date	Benzene	BTEX (Total)	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)	Motor Oil Range Organics (MRO)	Total Petroleum Hydrocarbons (TPH)	Chloride Concentration
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
			Depth to Groundwater less than 50'; Chloride Exception Under 15,000						
Backfill									
Backfill	-	July 7, 2025	ND	ND	ND	ND	ND	ND	15,000
Pastureland Excavation									
BS24-01	4.5	September 20, 2024	ND	ND	ND	ND	ND	ND	6140
BS24-02	4.5	September 20, 2024	ND	ND	ND	ND	ND	ND	7750
BS24-03	4.5	September 20, 2024	ND	ND	ND	ND	ND	ND	12100
BS24-04	4.5	September 20, 2024	ND	ND	ND	ND	ND	ND	7600
BS24-05	4.5	September 20, 2024	ND	ND	ND	ND	ND	ND	14200
BS24-06	4.5	September 20, 2024	ND	ND	ND	ND	ND	ND	7390
BS24-07	4.5	September 20, 2024	ND	ND	ND	ND	ND	ND	8040
BS24-08	4.5	September 20, 2024	ND	ND	ND	ND	ND	ND	7720
BS24-09	4.5	September 20, 2024	ND	ND	ND	ND	ND	ND	7010
BS24-10	4.5	September 20, 2024	ND	ND	ND	ND	ND	ND	6550
BS24-11	4.5	September 20, 2024	ND	ND	ND	ND	ND	ND	5020
BS24-12	4.5	September 20, 2024	ND	ND	ND	ND	ND	ND	6880
BS24-13	4.5	September 20, 2024	ND	ND	ND	80.6	ND	80.6	6880
BS24-14	1	September 20, 2024	ND	ND	ND	**106**	ND	**106**	2980
BS24-14	2	October 11, 2024	ND	ND	ND	ND	ND	ND	8010
BS24-15	1	September 20, 2024	ND	ND	ND	ND	ND	ND	7440
BS24-16	1	September 20, 2024	ND	ND	ND	ND	ND	ND	7070
BS24-17	1	September 20, 2024	ND	ND	ND	ND	ND	ND	10700
BS24-18	1	September 20, 2024	ND	ND	ND	ND	ND	ND	7730
BS24-19	1	September 20, 2024	ND	ND	ND	**121**	ND	**121**	4320
BS24-19	2	October 11, 2024	ND	ND	ND	ND	ND	ND	4870
BS24-20	1	September 20, 2024	ND	ND	ND	ND	ND	ND	3040
WS24-01	0-4.5	September 20, 2024	ND	ND	ND	ND	ND	ND	5040
WS24-02	0-4.5	September 20, 2024	ND	ND	ND	ND	ND	ND	5600
WS24-03	0-4.5	September 20, 2024	ND	ND	ND	ND	ND	ND	11800
WS24-04	0-4.5	September 20, 2024	ND	ND	ND	ND	ND	ND	8390
WS24-05	0-4.5	September 20, 2024	ND	0.00601	ND	ND	ND	ND	2870
WS24-06	0-1	September 20, 2024	ND	0.0046	ND	**161**	ND	**161**	2600
WS24-06	0-2	October 11, 2024	ND	ND	ND	ND	ND	ND	2690
WS24-07	0-1	September 20, 2024	ND	ND	ND	ND	ND	ND	3140
WS24-08	0-1	September 20, 2024	ND	0.00502	ND	ND	ND	ND	4020
WS24-09	0-1	September 20, 2024	ND	0.00454	ND	**234**	64	**298**	948
WS24-09	0-2	October 11, 2024	ND	ND	ND	ND	ND	ND	3640
WS24-10	0-1	September 20, 2024	ND	ND	ND	**172**	50.9	**222.9**	2450
WS24-10	0-2	October 11, 2024	ND	ND	ND	ND	ND	ND	7230

"ND" Not Detected at the Reporting Limit

"-" indicates not analyzed/assessed

Pastureland Excavation Data was originally submitted in a Remediation Closure Report Accepted April 24, 2025

Bold and green shaded indicates exceedance outside of NMOCD Reclamation Criteria

VERTEX

APPENDIX A - Daily Field Reports

Daily Site Visit Report

VERTEX

Client:	Devon Energy Corporation	Incident ID #:	
Site Location Name:	Spud 16 State #010H	API #:	30-015-41148
Inspection Date:	7/7/2025		

Summary of Times	
Arrived at Site	7/7/2025 4:47 PM
Departed Site	7/7/2025 5:35 PM

Daily Site Visit Report

Site Sketch

Site Sketch

Daily Site Visit Report

Field Notes

16:48 Completed saftey paperwork upon arrival

8:32 Identified little to no vegetation in the area around the backfill

8:32 Completed soil quality tests at the office the following day

8:43 Soil quality tests indicate that the backfill is slightly more nutrient rich than the surrounding material

Next Steps & Recommendations

1

Daily Site Visit Report

Site Photos

Viewing Direction: North	**Viewing Direction**: North
Little to no vegetation grows naturally west of the higher elevation area	Backfill sample collected on former excavation area
Viewing Direction: West	**Viewing Direction**: Southwest
White coloration and damp soil indicates the area was likely recently flooded by the salt lake	Little to no vegetation in the lower lying areas

Daily Site Visit Report

VERTEX

Viewing Direction: South	**Viewing Direction**: Northeast
Background sample taken about 30ft north of the backfill area	Little to no vegetation growth near the salt lake
Viewing Direction: South	**Viewing Direction**: East
Little to no vegetation growth near the salt lake	Little to no vegetation growth west of the risen areas

Daily Site Visit Report

Viewing Direction: North
The backfill sample on the left compared to the pasture sample on the right for PH. Indicated the background sample is more alkaline than the neutral backfill

Viewing Direction: North
The backfill sample on the left compared to the pasture sample on the right for potassium. Indicates the backfill has a low potassium content while the pasture has a very low concentration

Daily Site Visit Report

Viewing Direction: North
The backfill sample on the left compared to the pasture sample on the right for nitrogen. Indicates the backfill has a medium nitrogen content while the pasture has a very low concentration

Viewing Direction: North
The backfill sample on the left compared to the pasture sample on the right for phosphorus. Indicates both samples have a low concentration.

Daily Site Visit Report

V∃ VERTEX

Daily Site Visit Signature

Inspector: Katrina Taylor

Signature: _____

APPENDIX B – Laboratory Analysis

Report to:

Chad Hensley

envirotech

Practical Solutions for a Better Tomorrow

Analytical Report

Vertex Resource Services Inc.

Project Name:	Spud 16 State 10H
Work Order:	E410119
Job Number:	01058-0007
Received:	10/14/2024

5796 U.S. Hwy 64
Farmington, NM 87401

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

Revision: 2

Report Reviewed By:

Walter Hinchman
Laboratory Director
10/17/24

Date Reported: 10/17/24

Chad Hensley
3101 Boyd Drive
Carlsbad, NM 88220

Project Name: Spud 16 State 10H
Workorder: E410119
Date Received: 10/14/2024   8:00:00AM

Chad Hensley,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 10/14/2024   8:00:00AM, under the Project Name: Spud 16 State 10H.

The analytical test results summarized in this report with the Project Name: Spud 16 State 10H apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

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

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

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

Respectfully,

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

Field Offices:
Southern New Mexico Area
Lynn Jarboe   **Michelle Gonzales**
Laboratory Technical Representative   Client Representative
Office: 505-421-LABS(5227)   Office: 505-421-LABS(5227)
Cell: 505-320-4759   Cell: 505-947-8222
ljarboe@envirotech-inc.com   mgonzales@envirotech-inc.com

Envirotech Web Address: www.envirotech-inc.com

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Sample Summary

Vertex Resource Services Inc.	Project Name:	Spud 16 State 10H	**Reported:**
3101 Boyd Drive	Project Number:	01058-0007	
Carlsbad NM, 88220	Project Manager:	Chad Hensley	10/17/24 15:37

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
BS24-14 2'	E410119-01A	Soil	10/11/24	10/14/24	Glass Jar, 2 oz.
BS24-19 2'	E410119-02A	Soil	10/11/24	10/14/24	Glass Jar, 2 oz.
WS24-6 2'	E410119-03A	Soil	10/11/24	10/14/24	Glass Jar, 2 oz.
WS24-9 2'	E410119-04A	Soil	10/11/24	10/14/24	Glass Jar, 2 oz.
WS24-10 1'	E410119-05A	Soil	10/11/24	10/14/24	Glass Jar, 2 oz.

envirotech Inc.

Sample Data

Vertex Resource Services Inc.	Project Name: Spud 16 State 10H
3101 Boyd Drive	Project Number: 01058-0007 **Reported:**
Carlsbad NM, 88220	Project Manager: Chad Hensley 10/17/2024 3:37:48PM

BS24-14 2'

E410119-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: RKS			Batch: 2442006
Benzene	ND	0.0250	1	10/14/24	10/15/24	
Ethylbenzene	ND	0.0250	1	10/14/24	10/15/24	
Toluene	ND	0.0250	1	10/14/24	10/15/24	
o-Xylene	ND	0.0250	1	10/14/24	10/15/24	
p,m-Xylene	ND	0.0500	1	10/14/24	10/15/24	
Total Xylenes	ND	0.0250	1	10/14/24	10/15/24	
Surrogate: Bromofluorobenzene		*98.6 %*	*70-130*	*10/14/24*	*10/15/24*	
Surrogate: 1,2-Dichloroethane-d4		*95.1 %*	*70-130*	*10/14/24*	*10/15/24*	
Surrogate: Toluene-d8		*102 %*	*70-130*	*10/14/24*	*10/15/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RKS			Batch: 2442006
Gasoline Range Organics (C6-C10)	ND	20.0	1	10/14/24	10/15/24	
Surrogate: Bromofluorobenzene		*98.6 %*	*70-130*	*10/14/24*	*10/15/24*	
Surrogate: 1,2-Dichloroethane-d4		*95.1 %*	*70-130*	*10/14/24*	*10/15/24*	
Surrogate: Toluene-d8		*102 %*	*70-130*	*10/14/24*	*10/15/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: AF			Batch: 2442028
Diesel Range Organics (C10-C28)	ND	25.0	1	10/14/24	10/14/24	
Oil Range Organics (C28-C36)	ND	50.0	1	10/14/24	10/14/24	
Surrogate: n-Nonane		*95.9 %*	*50-200*	*10/14/24*	*10/14/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: IY			Batch: 2442019
Chloride	**8010**	200	10	10/14/24	10/14/24	

Sample Data

Vertex Resource Services Inc.	Project Name:	Spud 16 State 10H	
3101 Boyd Drive	Project Number:	01058-0007	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chad Hensley	10/17/2024 3:37:48PM

BS24-19 2'

E410119-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: RKS			Batch: 2442006
Benzene	ND	0.0250	1	10/14/24	10/15/24	
Ethylbenzene	ND	0.0250	1	10/14/24	10/15/24	
Toluene	ND	0.0250	1	10/14/24	10/15/24	
o-Xylene	ND	0.0250	1	10/14/24	10/15/24	
p,m-Xylene	ND	0.0500	1	10/14/24	10/15/24	
Total Xylenes	ND	0.0250	1	10/14/24	10/15/24	
Surrogate: Bromofluorobenzene		*98.7 %*	*70-130*	*10/14/24*	*10/15/24*	
Surrogate: 1,2-Dichloroethane-d4		*99.4 %*	*70-130*	*10/14/24*	*10/15/24*	
Surrogate: Toluene-d8		*102 %*	*70-130*	*10/14/24*	*10/15/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RKS			Batch: 2442006
Gasoline Range Organics (C6-C10)	ND	20.0	1	10/14/24	10/15/24	
Surrogate: Bromofluorobenzene		*98.7 %*	*70-130*	*10/14/24*	*10/15/24*	
Surrogate: 1,2-Dichloroethane-d4		*99.4 %*	*70-130*	*10/14/24*	*10/15/24*	
Surrogate: Toluene-d8		*102 %*	*70-130*	*10/14/24*	*10/15/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: AF			Batch: 2442028
Diesel Range Organics (C10-C28)	ND	25.0	1	10/14/24	10/14/24	
Oil Range Organics (C28-C36)	ND	50.0	1	10/14/24	10/14/24	
Surrogate: n-Nonane		*97.1 %*	*50-200*	*10/14/24*	*10/14/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: IY			Batch: 2442019
Chloride	**4870**	200	10	10/14/24	10/14/24	

Sample Data

Vertex Resource Services Inc.	Project Name:	Spud 16 State 10H	
3101 Boyd Drive	Project Number:	01058-0007	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chad Hensley	10/17/2024 3:37:48PM

WS24-6 2'

E410119-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: RKS			Batch: 2442006
Benzene	ND	0.0250	1	10/14/24	10/15/24	
Ethylbenzene	ND	0.0250	1	10/14/24	10/15/24	
Toluene	ND	0.0250	1	10/14/24	10/15/24	
o-Xylene	ND	0.0250	1	10/14/24	10/15/24	
p,m-Xylene	ND	0.0500	1	10/14/24	10/15/24	
Total Xylenes	ND	0.0250	1	10/14/24	10/15/24	
Surrogate: Bromofluorobenzene		*96.2 %*	*70-130*	*10/14/24*	*10/15/24*	
Surrogate: 1,2-Dichloroethane-d4		*103 %*	*70-130*	*10/14/24*	*10/15/24*	
Surrogate: Toluene-d8		*102 %*	*70-130*	*10/14/24*	*10/15/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RKS			Batch: 2442006
Gasoline Range Organics (C6-C10)	ND	20.0	1	10/14/24	10/15/24	
Surrogate: Bromofluorobenzene		*96.2 %*	*70-130*	*10/14/24*	*10/15/24*	
Surrogate: 1,2-Dichloroethane-d4		*103 %*	*70-130*	*10/14/24*	*10/15/24*	
Surrogate: Toluene-d8		*102 %*	*70-130*	*10/14/24*	*10/15/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: AF			Batch: 2442028
Diesel Range Organics (C10-C28)	ND	25.0	1	10/14/24	10/14/24	
Oil Range Organics (C28-C36)	ND	50.0	1	10/14/24	10/14/24	
Surrogate: n-Nonane		*99.5 %*	*50-200*	*10/14/24*	*10/14/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: IY			Batch: 2442019
Chloride	**2690**	40.0	2	10/14/24	10/14/24	

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Sample Data

Vertex Resource Services Inc.	Project Name:	Spud 16 State 10H	
3101 Boyd Drive	Project Number:	01058-0007	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chad Hensley	10/17/2024 3:37:48PM

WS24-9 2'

E410119-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: RKS			Batch: 2442006
Benzene	ND	0.0250	1	10/14/24	10/15/24	
Ethylbenzene	ND	0.0250	1	10/14/24	10/15/24	
Toluene	ND	0.0250	1	10/14/24	10/15/24	
o-Xylene	ND	0.0250	1	10/14/24	10/15/24	
p,m-Xylene	ND	0.0500	1	10/14/24	10/15/24	
Total Xylenes	ND	0.0250	1	10/14/24	10/15/24	
Surrogate: Bromofluorobenzene		*97.0 %*	*70-130*	*10/14/24*	*10/15/24*	
Surrogate: 1,2-Dichloroethane-d4		*92.9 %*	*70-130*	*10/14/24*	*10/15/24*	
Surrogate: Toluene-d8		*101 %*	*70-130*	*10/14/24*	*10/15/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RKS			Batch: 2442006
Gasoline Range Organics (C6-C10)	ND	20.0	1	10/14/24	10/15/24	
Surrogate: Bromofluorobenzene		*97.0 %*	*70-130*	*10/14/24*	*10/15/24*	
Surrogate: 1,2-Dichloroethane-d4		*92.9 %*	*70-130*	*10/14/24*	*10/15/24*	
Surrogate: Toluene-d8		*101 %*	*70-130*	*10/14/24*	*10/15/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: AF			Batch: 2442028
Diesel Range Organics (C10-C28)	ND	25.0	1	10/14/24	10/14/24	
Oil Range Organics (C28-C36)	ND	50.0	1	10/14/24	10/14/24	
Surrogate: n-Nonane		*99.4 %*	*50-200*	*10/14/24*	*10/14/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: IY			Batch: 2442019
Chloride	**3640**	200	10	10/14/24	10/14/24	

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Sample Data

Vertex Resource Services Inc.	Project Name:	Spud 16 State 10H	
3101 Boyd Drive	Project Number:	01058-0007	**Reported:**
Carlsbad NM, 88220	Project Manager:	Chad Hensley	10/17/2024 3:37:48PM

WS24-10 1'

E410119-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Volatile Organic Compounds by EPA 8260B	mg/kg	mg/kg	Analyst: RKS			Batch: 2442006
Benzene	ND	0.0250	1	10/14/24	10/15/24	
Ethylbenzene	ND	0.0250	1	10/14/24	10/15/24	
Toluene	ND	0.0250	1	10/14/24	10/15/24	
o-Xylene	ND	0.0250	1	10/14/24	10/15/24	
p,m-Xylene	ND	0.0500	1	10/14/24	10/15/24	
Total Xylenes	ND	0.0250	1	10/14/24	10/15/24	
Surrogate: Bromofluorobenzene		*97.5 %*	*70-130*	*10/14/24*	*10/15/24*	
Surrogate: 1,2-Dichloroethane-d4		*101 %*	*70-130*	*10/14/24*	*10/15/24*	
Surrogate: Toluene-d8		*100 %*	*70-130*	*10/14/24*	*10/15/24*	
Nonhalogenated Organics by EPA 8015D - GRO	mg/kg	mg/kg	Analyst: RKS			Batch: 2442006
Gasoline Range Organics (C6-C10)	ND	20.0	1	10/14/24	10/15/24	
Surrogate: Bromofluorobenzene		*97.5 %*	*70-130*	*10/14/24*	*10/15/24*	
Surrogate: 1,2-Dichloroethane-d4		*101 %*	*70-130*	*10/14/24*	*10/15/24*	
Surrogate: Toluene-d8		*100 %*	*70-130*	*10/14/24*	*10/15/24*	
Nonhalogenated Organics by EPA 8015D - DRO/ORO	mg/kg	mg/kg	Analyst: AF			Batch: 2442028
Diesel Range Organics (C10-C28)	ND	25.0	1	10/14/24	10/14/24	
Oil Range Organics (C28-C36)	ND	50.0	1	10/14/24	10/14/24	
Surrogate: n-Nonane		*102 %*	*50-200*	*10/14/24*	*10/14/24*	
Anions by EPA 300.0/9056A	mg/kg	mg/kg	Analyst: IY			Batch: 2442019
Chloride	**7230**	200	10	10/14/24	10/14/24	

QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Project Number: Project Manager:	Spud 16 State 10H 01058-0007 Chad Hensley	**Reported:** 10/17/2024 3:37:48PM

Volatile Organic Compounds by EPA 8260B

Analyst: RKS

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
Blank (2442006-BLK1)						Prepared: 10/14/24 Analyzed: 10/15/24			
Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: Bromofluorobenzene	*0.487*		*0.500*		*97.3*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*0.529*		*0.500*		*106*	*70-130*			
Surrogate: Toluene-d8	*0.514*		*0.500*		*103*	*70-130*			
LCS (2442006-BS1)						Prepared: 10/14/24 Analyzed: 10/15/24			
Benzene	2.35	0.0250	2.50		94.1	70-130			
Ethylbenzene	2.52	0.0250	2.50		101	70-130			
Toluene	2.42	0.0250	2.50		96.9	70-130			
o-Xylene	2.53	0.0250	2.50		101	70-130			
p,m-Xylene	5.07	0.0500	5.00		101	70-130			
Total Xylenes	7.60	0.0250	7.50		101	70-130			
Surrogate: Bromofluorobenzene	*0.485*		*0.500*		*96.9*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*0.497*		*0.500*		*99.4*	*70-130*			
Surrogate: Toluene-d8	*0.512*		*0.500*		*102*	*70-130*			
Matrix Spike (2442006-MS1)				**Source: E410119-04**		Prepared: 10/14/24 Analyzed: 10/15/24			
Benzene	2.41	0.0250	2.50	ND	96.5	48-131			
Ethylbenzene	2.56	0.0250	2.50	ND	102	45-135			
Toluene	2.48	0.0250	2.50	ND	99.2	48-130			
o-Xylene	2.51	0.0250	2.50	ND	100	43-135			
p,m-Xylene	5.02	0.0500	5.00	ND	100	43-135			
Total Xylenes	7.52	0.0250	7.50	ND	100	43-135			
Surrogate: Bromofluorobenzene	*0.482*		*0.500*		*96.4*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*0.473*		*0.500*		*94.6*	*70-130*			
Surrogate: Toluene-d8	*0.511*		*0.500*		*102*	*70-130*			
Matrix Spike Dup (2442006-MSD1)				**Source: E410119-04**		Prepared: 10/14/24 Analyzed: 10/15/24			
Benzene	2.42	0.0250	2.50	ND	96.7	48-131	0.248	23	
Ethylbenzene	2.53	0.0250	2.50	ND	101	45-135	1.04	27	
Toluene	2.46	0.0250	2.50	ND	98.6	48-130	0.607	24	
o-Xylene	2.53	0.0250	2.50	ND	101	43-135	1.05	27	
p,m-Xylene	5.10	0.0500	5.00	ND	102	43-135	1.71	27	
Total Xylenes	7.64	0.0250	7.50	ND	102	43-135	1.49	27	
Surrogate: Bromofluorobenzene	*0.483*		*0.500*		*96.6*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*0.505*		*0.500*		*101*	*70-130*			
Surrogate: Toluene-d8	*0.508*		*0.500*		*102*	*70-130*			

QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Project Number: Project Manager:	Spud 16 State 10H 01058-0007 Chad Hensley	**Reported:** 10/17/2024 3:37:48PM

Nonhalogenated Organics by EPA 8015D - GRO

Analyst: RKS

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
Blank (2442006-BLK1)								Prepared: 10/14/24 Analyzed: 10/15/24	
Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: Bromofluorobenzene	*0.487*		*0.500*		*97.3*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*0.529*		*0.500*		*106*	*70-130*			
Surrogate: Toluene-d8	*0.514*		*0.500*		*103*	*70-130*			
LCS (2442006-BS2)								Prepared: 10/14/24 Analyzed: 10/15/24	
Gasoline Range Organics (C6-C10)	54.5	20.0	50.0		109	70-130			
Surrogate: Bromofluorobenzene	*0.505*		*0.500*		*101*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*0.489*		*0.500*		*97.7*	*70-130*			
Surrogate: Toluene-d8	*0.525*		*0.500*		*105*	*70-130*			
Matrix Spike (2442006-MS2)				Source: E410119-04				Prepared: 10/14/24 Analyzed: 10/15/24	
Gasoline Range Organics (C6-C10)	54.6	20.0	50.0	ND	109	70-130			
Surrogate: Bromofluorobenzene	*0.502*		*0.500*		*100*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*0.505*		*0.500*		*101*	*70-130*			
Surrogate: Toluene-d8	*0.516*		*0.500*		*103*	*70-130*			
Matrix Spike Dup (2442006-MSD2)				Source: E410119-04				Prepared: 10/14/24 Analyzed: 10/15/24	
Gasoline Range Organics (C6-C10)	53.6	20.0	50.0	ND	107	70-130	1.75	20	
Surrogate: Bromofluorobenzene	*0.492*		*0.500*		*98.3*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*0.469*		*0.500*		*93.8*	*70-130*			
Surrogate: Toluene-d8	*0.514*		*0.500*		*103*	*70-130*			

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QC Summary Data

Vertex Resource Services Inc.		Project Name:	Spud 16 State 10H	**Reported:**
3101 Boyd Drive		Project Number:	01058-0007	
Carlsbad NM, 88220		Project Manager:	Chad Hensley	10/17/2024 3:37:48PM

Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: NV

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
Blank (2442028-BLK1)						Prepared: 10/14/24 Analyzed: 10/14/24			
Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	*45.5*		*50.0*		*91.1*	*50-200*			
LCS (2442028-BS1)						Prepared: 10/14/24 Analyzed: 10/14/24			
Diesel Range Organics (C10-C28)	249	25.0	250		99.6	38-132			
Surrogate: n-Nonane	*48.9*		*50.0*		*97.7*	*50-200*			
Matrix Spike (2442028-MS1)				Source: E410120-01		Prepared: 10/14/24 Analyzed: 10/14/24			
Diesel Range Organics (C10-C28)	273	25.0	250	ND	109	38-132			
Surrogate: n-Nonane	*54.7*		*50.0*		*109*	*50-200*			
Matrix Spike Dup (2442028-MSD1)				Source: E410120-01		Prepared: 10/14/24 Analyzed: 10/14/24			
Diesel Range Organics (C10-C28)	295	25.0	250	ND	118	38-132	8.00	20	
Surrogate: n-Nonane	*57.4*		*50.0*		*115*	*50-200*			

envirotech Inc.

QC Summary Data

Vertex Resource Services Inc. 3101 Boyd Drive Carlsbad NM, 88220	Project Name: Project Number: Project Manager:	Spud 16 State 10H 01058-0007 Chad Hensley	**Reported:** 10/17/2024 3:37:48PM

Anions by EPA 300.0/9056A

Analyst: IY

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
Blank (2442019-BLK1)						Prepared: 10/14/24	Analyzed: 10/14/24		
Chloride	ND	20.0							
LCS (2442019-BS1)						Prepared: 10/14/24	Analyzed: 10/14/24		
Chloride	253	20.0	250		101	90-110			
Matrix Spike (2442019-MS1)				Source: E410118-03		Prepared: 10/14/24	Analyzed: 10/14/24		
Chloride	586	200	250	347	95.9	80-120			
Matrix Spike Dup (2442019-MSD1)				Source: E410118-03		Prepared: 10/14/24	Analyzed: 10/14/24		
Chloride	595	200	250	347	99.5	80-120	1.53	20	

QC Summary Report Comment:

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

envirotech Inc.

Definitions and Notes

Vertex Resource Services Inc.	Project Name: Spud 16 State 10H
3101 Boyd Drive	Project Number: 01058-0007
Carlsbad NM, 88220	Project Manager: Chad Hensley

Reported:
10/17/24 15:37

ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
RPD	Relative Percent Difference
DNI	Did Not Ignite
DNR	Did not react with the addition of acid or base.

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

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

envirotech Inc.

Chain of Custody

Client Information	Invoice Information	Lab Use Only	TAT	State

Client Information
- Client: Vertex
- Project Name: Spud 16 State Unit.
- Project Manager: Chad Hensley
- Address: 3101 Boyd Dr.
- City, State, Zip: Carlsbad, NM 88220
- Phone: 575-361-9639
- Email: CHensley@vertexresource.com
- RPlugg@vertexresource.com

Invoice Information
- Company: (Bill To Devon)
- Address: 5315 Buena Vista Dr
- City, State, Zip: Carlsbad, NM 88220
- Phone: 575-748-1822
- Email: dale.woodall@dvn.com
- Miscellaneous:

Lab Use Only
- Lab WO# E410119
- Job Number 9058·0007

TAT: 1D | 2D | 3D | Std (X)

State: NM | CO | UT | TX

EPA Program: SDWA | CWA | RCRA
- Compliance: Y or N
- PWSID #

Sample Information

Time Sampled	Date Sampled	Matrix	No. of Containers	Sample ID	Field Filter	Lab Number	DRO/ORO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Chloride 300.0	BGDOC - NM	TCEQ 1005 - TX	RCRA 8 Metals	Remarks
12:15	10.11.24	soil	1,402 var	BS24-14 2'		1	X	X	X		X				
12:22	10.11.24	soil	1,402 jar	BS24-19 2'		2									
12:35	10.11.24	soil	1,402 jar	WS24 BS24-6 2'		3									
12:45	10.11.24	soil	1,402 jar	WS24 BS24-9 2'		4									
1:00	10.11.24	soil	1,402 jar	WS24-10 1'		5	↓	↓	↓		↓				

Additional Instructions: WO#2116574a Dale Woodall

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.

Sampled by: _____

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
[signature]	10/11/24		Jamba	10·11·24	1220
Jamba	10·11·24	1635	[signature]	10·11·24	1700
L.M.	10·11·24	2400	Ruth Mar	10·14·24	8:00

Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6C on subsequent days

Lab Use Only
Received on ice: (Y) / N
T1 _____ T2 _____ T3 _____
AVG Temp °C __4__

Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other _____   Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA

Note: Samples are discarded 14 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.

envirotech

Envirotech Analytical Laboratory
Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.
If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	Vertex Resource Services Inc.	Date Received:	10/14/24 08:00	Work Order ID: E410119
Phone:	(575) 748-0176	Date Logged In:	10/11/24 14:47	Logged In By: Raina Schwanz
Email:	chensley@vertexresources.com	Due Date:	10/18/24 17:00 (4 day TAT)	

Chain of Custody (COC)

1. Does the sample ID match the COC?	Yes
2. Does the number of samples per sampling site location match the COC	Yes
3. Were samples dropped off by client or carrier?	Yes
4. Was the COC complete, i.e., signatures, dates/times, requested analyses?	No
5. Were all samples received within holding time?	Yes

Note: Analysis, such as pH which should be conducted in the field, i.e, 15 minute hold time, are not included in this disucssion.

Carrier: Courier

Sample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT?	Yes

Sample Cooler

7. Was a sample cooler received?	Yes
8. If yes, was cooler received in good condition?	Yes
9. Was the sample(s) received intact, i.e., not broken?	Yes
10. Were custody/security seals present?	No
11. If yes, were custody/security seals intact?	NA
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C	Yes

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

13. If no visible ice, record the temperature.   Actual sample temperature: 4°C

Sample Container

14. Are aqueous VOC samples present?	No
15. Are VOC samples collected in VOA Vials?	NA
16. Is the head space less than 6-8 mm (pea sized or less)?	NA
17. Was a trip blank (TB) included for VOC analyses?	NA
18. Are non-VOC samples collected in the correct containers?	Yes
19. Is the appropriate volume/weight or number of sample containers collected?	Yes

Field Label

20. Were field sample labels filled out with the minimum information:	
Sample ID?	Yes
Date/Time Collected?	Yes
Collectors name?	Yes

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved?	No
22. Are sample(s) correctly preserved?	NA
24. Is lab filteration required and/or requested for dissolved metals?	No

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase?	No
27. If yes, does the COC specify which phase(s) is to be analyzed?	NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory?	No
29. Was a subcontract laboratory specified by the client and if so who?	NA

Subcontract Lab: NA

Comments/Resolution

Sampler not marked on COC.

Client Instruction

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

envirotech Inc.

eurofins

Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Chad Hensley
Vertex
3101 Boyd Dr
Carlsbad, New Mexico 88220
Generated 6/5/2024 4:10:03 PM

JOB DESCRIPTION

Spud 16 State #10H

JOB NUMBER

885-5200-1

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
6/5/2024 4:10:03 PM

Authorized for release by
Andy Freeman, Business Unit Manager
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Client: Vertex

Laboratory Job ID: 885-5200-1

Project/Site: Spud 16 State #10H

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Eurofins Albuquerque

6/5/2024

Definitions/Glossary

Client: Vertex

Project/Site: Spud 16 State #10H

Job ID: 885-5200-1

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

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Case Narrative

Client: Vertex

Project: Spud 16 State #10H

Job ID: 885-5200-1

Job ID: 885-5200-1   **Eurofins Albuquerque**

Job Narrative
885-5200-1

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

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

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

Receipt
The samples were received on 5/29/2024 7:55 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.6°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
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.

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Client Sample Results

Client: Vertex

Project/Site: Spud 16 State #10H

Job ID: 885-5200-1

Client Sample ID: BG24-05

Date Collected: 05/24/24 09:35

Date Received: 05/29/24 07:55

Lab Sample ID: 885-5200-1

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		4.9	mg/Kg		05/29/24 11:28	06/03/24 05:22	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*96*		*35 - 166*			*05/29/24 11:28*	*06/03/24 05:22*	*1*

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		05/29/24 11:28	06/03/24 05:22	1
Ethylbenzene	ND		0.049	mg/Kg		05/29/24 11:28	06/03/24 05:22	1
Toluene	ND		0.049	mg/Kg		05/29/24 11:28	06/03/24 05:22	1
Xylenes, Total	ND		0.099	mg/Kg		05/29/24 11:28	06/03/24 05:22	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*89*		*48 - 145*			*05/29/24 11:28*	*06/03/24 05:22*	*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		05/30/24 14:51	05/31/24 14:04	1
Motor Oil Range Organics [C28-C40]	ND		45	mg/Kg		05/30/24 14:51	05/31/24 14:04	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	*94*		*62 - 134*			*05/30/24 14:51*	*05/31/24 14:04*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**720**		60	mg/Kg		05/31/24 07:03	05/31/24 11:00	20

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Client Sample Results

Client: Vertex
Project/Site: Spud 16 State #10H

Job ID: 885-5200-1

Client Sample ID: BG24-06

Lab Sample ID: 885-5200-2

Date Collected: 05/24/24 10:12

Matrix: Solid

Date Received: 05/29/24 07:55

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		05/29/24 11:28	06/03/24 05:45	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*99*		*35 - 166*			*05/29/24 11:28*	*06/03/24 05:45*	*1*

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024	mg/Kg		05/29/24 11:28	06/03/24 05:45	1
Ethylbenzene	ND		0.049	mg/Kg		05/29/24 11:28	06/03/24 05:45	1
Toluene	ND		0.049	mg/Kg		05/29/24 11:28	06/03/24 05:45	1
Xylenes, Total	ND		0.097	mg/Kg		05/29/24 11:28	06/03/24 05:45	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*93*		*48 - 145*			*05/29/24 11:28*	*06/03/24 05:45*	*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		05/30/24 14:51	05/31/24 14:15	1
Motor Oil Range Organics [C28-C40]	ND		48	mg/Kg		05/30/24 14:51	05/31/24 14:15	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	*95*		*62 - 134*			*05/30/24 14:51*	*05/31/24 14:15*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**120**		60	mg/Kg		05/31/24 07:03	05/31/24 11:12	20

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Client Sample Results

Client: Vertex

Project/Site: Spud 16 State #10H

Job ID: 885-5200-1

Client Sample ID: BG24-07   **Lab Sample ID: 885-5200-3**

Date Collected: 05/24/24 10:50   **Matrix: Solid**

Date Received: 05/29/24 07:55

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		05/29/24 11:28	06/03/24 06:09	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		35 - 166			05/29/24 11:28	06/03/24 06:09	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		05/29/24 11:28	06/03/24 06:09	1
Ethylbenzene	ND		0.049	mg/Kg		05/29/24 11:28	06/03/24 06:09	1
Toluene	ND		0.049	mg/Kg		05/29/24 11:28	06/03/24 06:09	1
Xylenes, Total	ND		0.098	mg/Kg		05/29/24 11:28	06/03/24 06:09	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		48 - 145			05/29/24 11:28	06/03/24 06:09	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		05/30/24 14:51	05/31/24 14:25	1
Motor Oil Range Organics [C28-C40]	ND		50	mg/Kg		05/30/24 14:51	05/31/24 14:25	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	97		62 - 134			05/30/24 14:51	05/31/24 14:25	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		60	mg/Kg		05/31/24 07:03	05/31/24 11:24	20

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QC Sample Results

Client: Vertex

Job ID: 885-5200-1

Project/Site: Spud 16 State #10H

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

Lab Sample ID: MB 885-5788/1-A
Matrix: Solid
Analysis Batch: 6017

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 5788

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		5.0	mg/Kg		05/29/24 11:28	06/02/24 19:36	1

Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*99*		*35 - 166*			*05/29/24 11:28*	*06/02/24 19:36*	*1*

Lab Sample ID: LCS 885-5788/2-A
Matrix: Solid
Analysis Batch: 6017

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 5788

Analyte		Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
Gasoline Range Organics (GRO)-C6-C10		25.0	25.7		mg/Kg		103	70 - 130	

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

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 885-5788/1-A
Matrix: Solid
Analysis Batch: 6019

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 5788

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		05/29/24 11:28	06/02/24 19:36	1
Ethylbenzene	ND		0.050	mg/Kg		05/29/24 11:28	06/02/24 19:36	1
Toluene	ND		0.050	mg/Kg		05/29/24 11:28	06/02/24 19:36	1
Xylenes, Total	ND		0.10	mg/Kg		05/29/24 11:28	06/02/24 19:36	1

Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*94*		*48 - 145*			*05/29/24 11:28*	*06/02/24 19:36*	*1*

Lab Sample ID: LCS 885-5788/3-A
Matrix: Solid
Analysis Batch: 6019

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 5788

Analyte		Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
Benzene		1.00	0.971		mg/Kg		97	70 - 130	
Ethylbenzene		1.00	0.933		mg/Kg		93	70 - 130	
m-Xylene & p-Xylene		2.00	1.89		mg/Kg		95	70 - 130	
o-Xylene		1.00	0.925		mg/Kg		92	70 - 130	
Toluene		1.00	0.920		mg/Kg		92	70 - 130	

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	*98*		*48 - 145*

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QC Sample Results

Client: Vertex
Job ID: 885-5200-1

Project/Site: Spud 16 State #10H

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

Lab Sample ID: MB 885-5887/1-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 5949 **Prep Batch: 5887**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10	mg/Kg		05/30/24 14:51	05/31/24 13:42	1
Motor Oil Range Organics [C28-C40]	ND		50	mg/Kg		05/30/24 14:51	05/31/24 13:42	1

Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	113		62 - 134			05/30/24 14:51	05/31/24 13:42	1

Lab Sample ID: LCS 885-5887/2-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 5949 **Prep Batch: 5887**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
Diesel Range Organics [C10-C28]	50.0	53.5		mg/Kg		107	60 - 135	

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Di-n-octyl phthalate (Surr)	106		62 - 134

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 885-5912/2-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 5977 **Prep Batch: 5912**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.5	mg/Kg		05/31/24 07:03	05/31/24 08:33	1

Lab Sample ID: LCS 885-5912/3-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 5977 **Prep Batch: 5912**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
Chloride	15.0	14.2		mg/Kg		95	90 - 110	

Lab Sample ID: MRL 885-5912/1-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 5977 **Prep Batch: 5912**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits	
Chloride	1.50	1.61		mg/L		107	50 - 150	

Lab Sample ID: MB 885-5977/109 **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 5977

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	mg/Kg			06/01/24 01:36	1

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QC Sample Results

Client: Vertex   Job ID: 885-5200-1

Project/Site: Spud 16 State #10H

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MRL 885-5977/108   **Client Sample ID: Lab Control Sample**

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

Analysis Batch: 5977

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			0.500	0.532		mg/L		106	50 - 150		

QC Association Summary

Client: Vertex

Job ID: 885-5200-1

Project/Site: Spud 16 State #10H

GC VOA

Prep Batch: 5788

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-5200-1	BG24-05	Total/NA	Solid	5030C	
885-5200-2	BG24-06	Total/NA	Solid	5030C	
885-5200-3	BG24-07	Total/NA	Solid	5030C	
MB 885-5788/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 885-5788/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCS 885-5788/3-A	Lab Control Sample	Total/NA	Solid	5030C	

Analysis Batch: 6017

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-5200-1	BG24-05	Total/NA	Solid	8015M/D	5788
885-5200-2	BG24-06	Total/NA	Solid	8015M/D	5788
885-5200-3	BG24-07	Total/NA	Solid	8015M/D	5788
MB 885-5788/1-A	Method Blank	Total/NA	Solid	8015M/D	5788
LCS 885-5788/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	5788

Analysis Batch: 6019

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-5200-1	BG24-05	Total/NA	Solid	8021B	5788
885-5200-2	BG24-06	Total/NA	Solid	8021B	5788
885-5200-3	BG24-07	Total/NA	Solid	8021B	5788
MB 885-5788/1-A	Method Blank	Total/NA	Solid	8021B	5788
LCS 885-5788/3-A	Lab Control Sample	Total/NA	Solid	8021B	5788

GC Semi VOA

Prep Batch: 5887

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-5200-1	BG24-05	Total/NA	Solid	SHAKE	
885-5200-2	BG24-06	Total/NA	Solid	SHAKE	
885-5200-3	BG24-07	Total/NA	Solid	SHAKE	
MB 885-5887/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-5887/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	

Analysis Batch: 5949

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-5200-1	BG24-05	Total/NA	Solid	8015M/D	5887
885-5200-2	BG24-06	Total/NA	Solid	8015M/D	5887
885-5200-3	BG24-07	Total/NA	Solid	8015M/D	5887
MB 885-5887/1-A	Method Blank	Total/NA	Solid	8015M/D	5887
LCS 885-5887/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	5887

HPLC/IC

Prep Batch: 5912

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-5200-1	BG24-05	Total/NA	Solid	300_Prep	
885-5200-2	BG24-06	Total/NA	Solid	300_Prep	
885-5200-3	BG24-07	Total/NA	Solid	300_Prep	
MB 885-5912/2-A	Method Blank	Total/NA	Solid	300_Prep	
LCS 885-5912/3-A	Lab Control Sample	Total/NA	Solid	300_Prep	
MRL 885-5912/1-A	Lab Control Sample	Total/NA	Solid	300_Prep	

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QC Association Summary

Client: Vertex

Job ID: 885-5200-1

Project/Site: Spud 16 State #10H

HPLC/IC

Analysis Batch: 5977

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-5200-1	BG24-05	Total/NA	Solid	300.0	5912
885-5200-2	BG24-06	Total/NA	Solid	300.0	5912
885-5200-3	BG24-07	Total/NA	Solid	300.0	5912
MB 885-5912/2-A	Method Blank	Total/NA	Solid	300.0	5912
MB 885-5977/109	Method Blank	Total/NA	Solid	300.0	
LCS 885-5912/3-A	Lab Control Sample	Total/NA	Solid	300.0	5912
MRL 885-5912/1-A	Lab Control Sample	Total/NA	Solid	300.0	5912
MRL 885-5977/108	Lab Control Sample	Total/NA	Solid	300.0	

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6/5/2024

Lab Chronicle

Client: Vertex

Project/Site: Spud 16 State #10H

Job ID: 885-5200-1

Client Sample ID: BG24-05

Date Collected: 05/24/24 09:35
Date Received: 05/29/24 07:55

Lab Sample ID: 885-5200-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			5788	AT	EET ALB	05/29/24 11:28
Total/NA	Analysis	8015M/D		1	6017	JP	EET ALB	06/03/24 05:22
Total/NA	Prep	5030C			5788	AT	EET ALB	05/29/24 11:28
Total/NA	Analysis	8021B		1	6019	JP	EET ALB	06/03/24 05:22
Total/NA	Prep	SHAKE			5887	SB	EET ALB	05/30/24 14:51
Total/NA	Analysis	8015M/D		1	5949	JU	EET ALB	05/31/24 14:04
Total/NA	Prep	300_Prep			5912	JT	EET ALB	05/31/24 07:03
Total/NA	Analysis	300.0		20	5977	JT	EET ALB	05/31/24 11:00

Client Sample ID: BG24-06

Date Collected: 05/24/24 10:12
Date Received: 05/29/24 07:55

Lab Sample ID: 885-5200-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			5788	AT	EET ALB	05/29/24 11:28
Total/NA	Analysis	8015M/D		1	6017	JP	EET ALB	06/03/24 05:45
Total/NA	Prep	5030C			5788	AT	EET ALB	05/29/24 11:28
Total/NA	Analysis	8021B		1	6019	JP	EET ALB	06/03/24 05:45
Total/NA	Prep	SHAKE			5887	SB	EET ALB	05/30/24 14:51
Total/NA	Analysis	8015M/D		1	5949	JU	EET ALB	05/31/24 14:15
Total/NA	Prep	300_Prep			5912	JT	EET ALB	05/31/24 07:03
Total/NA	Analysis	300.0		20	5977	JT	EET ALB	05/31/24 11:12

Client Sample ID: BG24-07

Date Collected: 05/24/24 10:50
Date Received: 05/29/24 07:55

Lab Sample ID: 885-5200-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			5788	AT	EET ALB	05/29/24 11:28
Total/NA	Analysis	8015M/D		1	6017	JP	EET ALB	06/03/24 06:09
Total/NA	Prep	5030C			5788	AT	EET ALB	05/29/24 11:28
Total/NA	Analysis	8021B		1	6019	JP	EET ALB	06/03/24 06:09
Total/NA	Prep	SHAKE			5887	SB	EET ALB	05/30/24 14:51
Total/NA	Analysis	8015M/D		1	5949	JU	EET ALB	05/31/24 14:25
Total/NA	Prep	300_Prep			5912	JT	EET ALB	05/31/24 07:03
Total/NA	Analysis	300.0		20	5977	JT	EET ALB	05/31/24 11:24

Laboratory References:

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

Eurofins Albuquerque

Accreditation/Certification Summary

Client: Vertex

Job ID: 885-5200-1

Project/Site: Spud 16 State #10H

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

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	NM100001	02-26-25

Eurofins Albuquerque

6/5/2024

Chain-of-Custody Record

Client: Vertex

(Bill to Devon)

Mailing Address:

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:

Spud 16 State #10H

Project #:

23E-02857

Project Manager:

Chad Hensley

Sampler: Riley Plogger

On Ice: ☐ Yes   ☐ No

# of Coolers: 1   40g.

Cooler Temp (Including CF): 0.6-0=0.6 (°C)
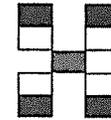
HALL ENVIRONMENTAL ANALYSIS LABO[RATORY]

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 8[...]

Tel. 505-345-3975   Fax 505-345-410[...]

885-5200 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, NO₂, NO₃, PO₄, SO₄	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)				
5-24	9:35	Soil	BG24-05	4 oz	Ice		✓	✓					✓							
5-24	10:12		BG24-06																	
5-24	10:50	↓	BG24-07	↓	✓		✓	✓					✓							

Date	Time	Relinquished by		Received by	Via	Date	Time
5/28/24	9:40	_[signature]_ Regd McGee		_[signature]_		5/28/24	940
5/28/24	1900	_[signature]_ Cummins		_[signature]_ courier		5/29/24	7:55

Remarks:

WO #21165742

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: 885-5200-1

Login Number: 5200
List Number: 1
Creator: McQuiston, Steven

List Source: Eurofins Albuquerque

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
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	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Eurofins Albuquerque

Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Chad Hensley
Vertex
3101 Boyd Dr
Carlsbad, New Mexico 88220

Generated 9/30/2024 3:59:42 PM

JOB DESCRIPTION

SPUD 16 10H
23 E - 02857

JOB NUMBER

890-7167-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

Eurofins Carlsbad

Job Notes

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

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

Authorization

Kramer

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

Generated
9/30/2024 3:59:42 PM

Eurofins Carlsbad is a laboratory within Eurofins Environment Testing South Central, LLC, a company within Eurofins Environment Testing Group of Companies

Client: Vertex
Project/Site: SPUD 16 10H

Laboratory Job ID: 890-7167-1
SDG: 23 E - 02857

Table of Contents

Eurofins Carlsbad
9/30/2024

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Definitions/Glossary

Client: Vertex

Project/Site: SPUD 16 10H

Job ID: 890-7167-1

SDG: 23 E - 02857

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Eurofins Carlsbad

Case Narrative

Client: Vertex
Project: SPUD 16 10H

Job ID: 890-7167-1

Job ID: 890-7167-1   **Eurofins Carlsbad**

Job Narrative
890-7167-1

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 9/25/2024 4:44 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.2°C.

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: BES 24 - 01 (890-7167-1), BES 24 - 02 (890-7167-2), BES 24 - 03 (890-7167-3), BES 24 - 04 (890-7167-4), BES 24 - 05 (890-7167-5), BES 24 - 06 (890-7167-6), BES 24 - 07 (890-7167-7), BES 24 - 08 (890-7167-8), BES 24 - 09 (890-7167-9), BES 24 - 10 (890-7167-10), BES 24 - 11 (890-7167-11), BES 24 - 12 (890-7167-12), BES 24 - 13 (890-7167-13), BES 24 - 14 (890-7167-14), BES 24 - 15 (890-7167-15), BES 24 - 16 (890-7167-16), BES 24 - 17 (890-7167-17), BES 24 - 18 (890-7167-18), BES 24 - 19 (890-7167-19), BES 24 - 20 (890-7167-20), WES 24 - 01 (890-7167-21), WES 24 - 02 (890-7167-22), WES 24 - 03 (890-7167-23), WES 24 - 04 (890-7167-24), WES 24 - 05 (890-7167-25), WES 24 - 06 (890-7167-26), WES 24 - 07 (890-7167-27), WES 24 - 08 (890-7167-28), WES 24 - 09 (890-7167-29) and WES 24 - 10 (890-7167-30).

GC VOA
Method 8021B: Surrogate recovery for the following samples were outside control limits: WES 24 - 04 (890-7167-24), WES 24 - 07 (890-7167-27), WES 24 - 08 (890-7167-28) and WES 24 - 09 (890-7167-29). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-91911 and analytical batch 880-91882 was outside the upper control limits.

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

Diesel Range Organics
Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-91860 and analytical batch 880-91875 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: BES 24 - 20 (890-7167-20). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-91861 and analytical batch 880-91877 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: WES 24 - 02 (890-7167-22), WES 24 - 03 (890-7167-23), WES 24 - 05 (890-7167-25), WES 24 - 06 (890-7167-26), WES 24 - 08 (890-7167-28), WES 24 - 09 (890-7167-29) and WES 24 - 10 (890-7167-30). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: The method blank for preparation batch 880-91861 and analytical batch 880-91877 contained Diesel Range Organics (Over C10-C28) above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

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

HPLC/IC

Eurofins Carlsbad

Case Narrative

Client: Vertex

Project: SPUD 16 10H

Job ID: 890-7167-1

Job ID: 890-7167-1 (Continued)   **Eurofins Carlsbad**

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

Eurofins Carlsbad

Client Sample Results

Client: Vertex

Project/Site: SPUD 16 10H

Job ID: 890-7167-1

SDG: 23 E - 02857

Client Sample ID: BES 24 - 01

Lab Sample ID: 890-7167-1

Date Collected: 09/20/24 10:04

Date Received: 09/25/24 16:44

Sample Depth: 4.5'

Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		09/27/24 09:24	09/27/24 16:11	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		09/27/24 09:24	09/27/24 16:11	1
Toluene	<0.00201	U	0.00201		mg/Kg		09/27/24 09:24	09/27/24 16:11	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		09/27/24 09:24	09/27/24 16:11	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		09/27/24 09:24	09/27/24 16:11	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		09/27/24 09:24	09/27/24 16:11	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	115		70 - 130				09/27/24 09:24	09/27/24 16:11	1
1,4-Difluorobenzene (Surr)	99		70 - 130				09/27/24 09:24	09/27/24 16:11	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			09/27/24 16:11	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			09/27/24 10:34	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		09/26/24 14:15	09/27/24 10:34	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/26/24 14:15	09/27/24 10:34	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/26/24 14:15	09/27/24 10:34	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	119		70 - 130				09/26/24 14:15	09/27/24 10:34	1
o-Terphenyl	124		70 - 130				09/26/24 14:15	09/27/24 10:34	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**6140**		100		mg/Kg			09/27/24 09:33	20

Client Sample ID: BES 24 - 02

Lab Sample ID: 890-7167-2

Date Collected: 09/20/24 10:09

Date Received: 09/25/24 16:44

Sample Depth: 4.5'

Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		09/27/24 09:24	09/27/24 16:32	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		09/27/24 09:24	09/27/24 16:32	1
Toluene	<0.00201	U	0.00201		mg/Kg		09/27/24 09:24	09/27/24 16:32	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		09/27/24 09:24	09/27/24 16:32	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		09/27/24 09:24	09/27/24 16:32	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		09/27/24 09:24	09/27/24 16:32	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	114		70 - 130				09/27/24 09:24	09/27/24 16:32	1

Eurofins Carlsbad

Client Sample Results

Client: Vertex
Project/Site: SPUD 16 10H

Job ID: 890-7167-1
SDG: 23 E - 02857

Client Sample ID: BES 24 - 02
Date Collected: 09/20/24 10:09
Date Received: 09/25/24 16:44
Sample Depth: 4.5'

Lab Sample ID: 890-7167-2
Matrix: Solid

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

Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	98		70 - 130		09/27/24 09:24	09/27/24 16:32	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			09/27/24 16:32	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			09/27/24 11:36	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/26/24 14:15	09/27/24 11:36	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/26/24 14:15	09/27/24 11:36	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/26/24 14:15	09/27/24 11:36	1

Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
1-Chlorooctane	102		70 - 130		09/26/24 14:15	09/27/24 11:36	1
o-Terphenyl	107		70 - 130		09/26/24 14:15	09/27/24 11:36	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**7750**		101		mg/Kg			09/27/24 09:50	20

Client Sample ID: BES 24 - 03
Date Collected: 09/20/24 10:14
Date Received: 09/25/24 16:44
Sample Depth: 4.5'

Lab Sample ID: 890-7167-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		09/27/24 09:24	09/27/24 16:52	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		09/27/24 09:24	09/27/24 16:52	1
Toluene	<0.00202	U	0.00202		mg/Kg		09/27/24 09:24	09/27/24 16:52	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		09/27/24 09:24	09/27/24 16:52	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		09/27/24 09:24	09/27/24 16:52	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		09/27/24 09:24	09/27/24 16:52	1

Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	116		70 - 130		09/27/24 09:24	09/27/24 16:52	1
1,4-Difluorobenzene (Surr)	99		70 - 130		09/27/24 09:24	09/27/24 16:52	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			09/27/24 16:52	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			09/27/24 11:56	1

Eurofins Carlsbad

Client Sample Results

Client: Vertex
Project/Site: SPUD 16 10H

Job ID: 890-7167-1
SDG: 23 E - 02857

Client Sample ID: BES 24 - 03
Date Collected: 09/20/24 10:14
Date Received: 09/25/24 16:44
Sample Depth: 4.5'

Lab Sample ID: 890-7167-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		09/26/24 14:15	09/27/24 11:56	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/26/24 14:15	09/27/24 11:56	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/26/24 14:15	09/27/24 11:56	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	*111*		*70 - 130*				*09/26/24 14:15*	*09/27/24 11:56*	*1*
o-Terphenyl	*119*		*70 - 130*				*09/26/24 14:15*	*09/27/24 11:56*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**12100**		252		mg/Kg			09/27/24 09:55	50

Client Sample ID: BES 24 - 04
Date Collected: 09/20/24 10:19
Date Received: 09/25/24 16:44
Sample Depth: 4.5'

Lab Sample ID: 890-7167-4
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/27/24 09:24	09/27/24 17:12	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/27/24 09:24	09/27/24 17:12	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/27/24 09:24	09/27/24 17:12	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/27/24 09:24	09/27/24 17:12	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/27/24 09:24	09/27/24 17:12	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/27/24 09:24	09/27/24 17:12	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*				*09/27/24 09:24*	*09/27/24 17:12*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*				*09/27/24 09:24*	*09/27/24 17:12*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			09/27/24 17:12	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			09/27/24 12:17	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		09/26/24 14:15	09/27/24 12:17	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/26/24 14:15	09/27/24 12:17	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/26/24 14:15	09/27/24 12:17	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	*106*		*70 - 130*				*09/26/24 14:15*	*09/27/24 12:17*	*1*
o-Terphenyl	*112*		*70 - 130*				*09/26/24 14:15*	*09/27/24 12:17*	*1*

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Client Sample Results

Client: Vertex
Project/Site: SPUD 16 10H

Job ID: 890-7167-1
SDG: 23 E - 02857

Client Sample ID: BES 24 - 04
Date Collected: 09/20/24 10:19
Date Received: 09/25/24 16:44
Sample Depth: 4.5'

Lab Sample ID: 890-7167-4
Matrix: Solid

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7600		101		mg/Kg			09/27/24 10:00	20

Client Sample ID: BES 24 - 05
Date Collected: 09/20/24 10:22
Date Received: 09/25/24 16:44
Sample Depth: 4.5'

Lab Sample ID: 890-7167-5
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/27/24 09:24	09/27/24 17:33	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/27/24 09:24	09/27/24 17:33	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/27/24 09:24	09/27/24 17:33	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/27/24 09:24	09/27/24 17:33	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/27/24 09:24	09/27/24 17:33	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/27/24 09:24	09/27/24 17:33	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	116		70 - 130				09/27/24 09:24	09/27/24 17:33	1
1,4-Difluorobenzene (Surr)	99		70 - 130				09/27/24 09:24	09/27/24 17:33	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			09/27/24 17:33	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			09/27/24 12:37	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/26/24 14:15	09/27/24 12:37	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/26/24 14:15	09/27/24 12:37	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/26/24 14:15	09/27/24 12:37	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	96		70 - 130				09/26/24 14:15	09/27/24 12:37	1
o-Terphenyl	103		70 - 130				09/26/24 14:15	09/27/24 12:37	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	14200		249		mg/Kg			09/27/24 10:06	50

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Client Sample Results

Client: Vertex

Project/Site: SPUD 16 10H

Job ID: 890-7167-1

SDG: 23 E - 02857

Client Sample ID: BES 24 - 06

Lab Sample ID: 890-7167-6

Date Collected: 09/20/24 10:25

Date Received: 09/25/24 16:44

Sample Depth: 4.5'

Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		09/27/24 09:24	09/27/24 17:53	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		09/27/24 09:24	09/27/24 17:53	1
Toluene	<0.00201	U	0.00201		mg/Kg		09/27/24 09:24	09/27/24 17:53	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		09/27/24 09:24	09/27/24 17:53	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		09/27/24 09:24	09/27/24 17:53	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		09/27/24 09:24	09/27/24 17:53	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	119		70 - 130				09/27/24 09:24	09/27/24 17:53	1
1,4-Difluorobenzene (Surr)	99		70 - 130				09/27/24 09:24	09/27/24 17:53	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			09/27/24 17:53	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			09/27/24 12:58	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		09/26/24 14:15	09/27/24 12:58	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		09/26/24 14:15	09/27/24 12:58	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		09/26/24 14:15	09/27/24 12:58	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	99		70 - 130				09/26/24 14:15	09/27/24 12:58	1
o-Terphenyl	108		70 - 130				09/26/24 14:15	09/27/24 12:58	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**7390**		99.2		mg/Kg			09/27/24 10:22	20

Client Sample ID: BES 24 - 07

Lab Sample ID: 890-7167-7

Date Collected: 09/20/24 10:30

Date Received: 09/25/24 16:44

Sample Depth: 4.5'

Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/27/24 09:24	09/27/24 18:14	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/27/24 09:24	09/27/24 18:14	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/27/24 09:24	09/27/24 18:14	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/27/24 09:24	09/27/24 18:14	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/27/24 09:24	09/27/24 18:14	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/27/24 09:24	09/27/24 18:14	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	119		70 - 130				09/27/24 09:24	09/27/24 18:14	1

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Client Sample Results

Client: Vertex
Project/Site: SPUD 16 10H

Job ID: 890-7167-1
SDG: 23 E - 02857

Client Sample ID: BES 24 - 07
Date Collected: 09/20/24 10:30
Date Received: 09/25/24 16:44
Sample Depth: 4.5'

Lab Sample ID: 890-7167-7
Matrix: Solid

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

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	99		70 - 130			09/27/24 09:24	09/27/24 18:14	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			09/27/24 18:14	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.7	U	49.7		mg/Kg			09/27/24 13:19	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.7	U	49.7		mg/Kg		09/26/24 14:15	09/27/24 13:19	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7		mg/Kg		09/26/24 14:15	09/27/24 13:19	1
Oil Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		09/26/24 14:15	09/27/24 13:19	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	105		70 - 130			09/26/24 14:15	09/27/24 13:19	1
o-Terphenyl	117		70 - 130			09/26/24 14:15	09/27/24 13:19	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**8040**		100		mg/Kg			09/27/24 10:27	20

Client Sample ID: BES 24 - 08
Date Collected: 09/20/24 10:34
Date Received: 09/25/24 16:44
Sample Depth: 4.5'

Lab Sample ID: 890-7167-8
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/27/24 09:24	09/27/24 18:34	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/27/24 09:24	09/27/24 18:34	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/27/24 09:24	09/27/24 18:34	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		09/27/24 09:24	09/27/24 18:34	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		09/27/24 09:24	09/27/24 18:34	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/27/24 09:24	09/27/24 18:34	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	121		70 - 130			09/27/24 09:24	09/27/24 18:34	1
1,4-Difluorobenzene (Surr)	100		70 - 130			09/27/24 09:24	09/27/24 18:34	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			09/27/24 18:34	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			09/27/24 13:39	1

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Client Sample Results

Client: Vertex
Project/Site: SPUD 16 10H

Job ID: 890-7167-1
SDG: 23 E - 02857

Client Sample ID: BES 24 - 08   Lab Sample ID: 890-7167-8
Date Collected: 09/20/24 10:34   **Matrix: Solid**
Date Received: 09/25/24 16:44
Sample Depth: 4.5'

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/26/24 14:15	09/27/24 13:39	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/26/24 14:15	09/27/24 13:39	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/26/24 14:15	09/27/24 13:39	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	114		70 - 130				09/26/24 14:15	09/27/24 13:39	1
o-Terphenyl	123		70 - 130				09/26/24 14:15	09/27/24 13:39	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**7720**		99.6		mg/Kg			09/27/24 10:33	20

Client Sample ID: BES 24 - 09   Lab Sample ID: 890-7167-9
Date Collected: 09/20/24 10:38   **Matrix: Solid**
Date Received: 09/25/24 16:44
Sample Depth: 4.5'

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/27/24 09:24	09/27/24 18:55	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/27/24 09:24	09/27/24 18:55	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/27/24 09:24	09/27/24 18:55	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		09/27/24 09:24	09/27/24 18:55	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		09/27/24 09:24	09/27/24 18:55	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/27/24 09:24	09/27/24 18:55	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	116		70 - 130				09/27/24 09:24	09/27/24 18:55	1
1,4-Difluorobenzene (Surr)	99		70 - 130				09/27/24 09:24	09/27/24 18:55	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			09/27/24 18:55	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			09/27/24 14:00	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/26/24 14:15	09/27/24 14:00	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/26/24 14:15	09/27/24 14:00	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/26/24 14:15	09/27/24 14:00	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	97		70 - 130				09/26/24 14:15	09/27/24 14:00	1
o-Terphenyl	104		70 - 130				09/26/24 14:15	09/27/24 14:00	1

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Client Sample Results

Client: Vertex　　　　　　　　　　　　　　　　　　　Job ID: 890-7167-1
Project/Site: SPUD 16 10H　　　　　　　　　　　　　SDG: 23 E - 02857

Client Sample ID: BES 24 - 09　　　　　　　　　Lab Sample ID: 890-7167-9
Date Collected: 09/20/24 10:38　　　　　　　　　　　　　　**Matrix: Solid**
Date Received: 09/25/24 16:44
Sample Depth: 4.5'

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7010		99.4		mg/Kg			09/27/24 10:38	20

Client Sample ID: BES 24 - 10　　　　　　　　　Lab Sample ID: 890-7167-10
Date Collected: 09/20/24 10:42　　　　　　　　　　　　　　**Matrix: Solid**
Date Received: 09/25/24 16:44
Sample Depth: 4.5'

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/27/24 09:24	09/27/24 19:15	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/27/24 09:24	09/27/24 19:15	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/27/24 09:24	09/27/24 19:15	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/27/24 09:24	09/27/24 19:15	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/27/24 09:24	09/27/24 19:15	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/27/24 09:24	09/27/24 19:15	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	117		70 - 130				09/27/24 09:24	09/27/24 19:15	1
1,4-Difluorobenzene (Surr)	99		70 - 130				09/27/24 09:24	09/27/24 19:15	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			09/27/24 19:15	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			09/27/24 14:20	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		09/26/24 14:15	09/27/24 14:20	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		09/26/24 14:15	09/27/24 14:20	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		09/26/24 14:15	09/27/24 14:20	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	106		70 - 130				09/26/24 14:15	09/27/24 14:20	1
o-Terphenyl	111		70 - 130				09/26/24 14:15	09/27/24 14:20	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6550		99.6		mg/Kg			09/27/24 10:43	20

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Client Sample Results

Client: Vertex

Project/Site: SPUD 16 10H

Job ID: 890-7167-1

SDG: 23 E - 02857

Client Sample ID: BES 24 - 11

Date Collected: 09/20/24 10:46

Date Received: 09/25/24 16:44

Sample Depth: 4.5'

Lab Sample ID: 890-7167-11

Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/27/24 09:28	09/27/24 14:48	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/27/24 09:28	09/27/24 14:48	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/27/24 09:28	09/27/24 14:48	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/27/24 09:28	09/27/24 14:48	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/27/24 09:28	09/27/24 14:48	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/27/24 09:28	09/27/24 14:48	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	114		70 - 130				09/27/24 09:28	09/27/24 14:48	1
1,4-Difluorobenzene (Surr)	100		70 - 130				09/27/24 09:28	09/27/24 14:48	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			09/27/24 14:48	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			09/27/24 15:01	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		09/26/24 14:15	09/27/24 15:01	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		09/26/24 14:15	09/27/24 15:01	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		09/26/24 14:15	09/27/24 15:01	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	112		70 - 130				09/26/24 14:15	09/27/24 15:01	1
o-Terphenyl	117		70 - 130				09/26/24 14:15	09/27/24 15:01	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**5020**		99.6		mg/Kg			09/27/24 10:49	20

Client Sample ID: BES 24 - 12

Date Collected: 09/20/24 10:54

Date Received: 09/25/24 16:44

Sample Depth: 4.5'

Lab Sample ID: 890-7167-12

Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/27/24 09:28	09/27/24 15:08	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/27/24 09:28	09/27/24 15:08	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/27/24 09:28	09/27/24 15:08	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/27/24 09:28	09/27/24 15:08	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/27/24 09:28	09/27/24 15:08	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/27/24 09:28	09/27/24 15:08	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		70 - 130				09/27/24 09:28	09/27/24 15:08	1

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Client Sample Results

Client: Vertex
Project/Site: SPUD 16 10H

Job ID: 890-7167-1
SDG: 23 E - 02857

Client Sample ID: BES 24 - 12
Date Collected: 09/20/24 10:54
Date Received: 09/25/24 16:44
Sample Depth: 4.5'

Lab Sample ID: 890-7167-12
Matrix: Solid

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

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	102		70 - 130				09/27/24 09:28	09/27/24 15:08	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			09/27/24 15:08	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.6	U	49.6		mg/Kg			09/27/24 15:22	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.6	U	49.6		mg/Kg		09/26/24 14:15	09/27/24 15:22	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6		mg/Kg		09/26/24 14:15	09/27/24 15:22	1
Oil Range Organics (Over C28-C36)	<49.6	U	49.6		mg/Kg		09/26/24 14:15	09/27/24 15:22	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	103		70 - 130				09/26/24 14:15	09/27/24 15:22	1
o-Terphenyl	110		70 - 130				09/26/24 14:15	09/27/24 15:22	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**6880**		99.6		mg/Kg			09/27/24 11:05	20

Client Sample ID: BES 24 - 13
Date Collected: 09/20/24 10:59
Date Received: 09/25/24 16:44
Sample Depth: 4.5'

Lab Sample ID: 890-7167-13
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		09/27/24 09:28	09/27/24 16:31	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		09/27/24 09:28	09/27/24 16:31	1
Toluene	<0.00201	U	0.00201		mg/Kg		09/27/24 09:28	09/27/24 16:31	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		09/27/24 09:28	09/27/24 16:31	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		09/27/24 09:28	09/27/24 16:31	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		09/27/24 09:28	09/27/24 16:31	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130				09/27/24 09:28	09/27/24 16:31	1
1,4-Difluorobenzene (Surr)	98		70 - 130				09/27/24 09:28	09/27/24 16:31	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			09/27/24 16:31	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**80.6**		50.0		mg/Kg			09/27/24 15:42	1

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Client Sample Results

Client: Vertex   Job ID: 890-7167-1
Project/Site: SPUD 16 10H   SDG: 23 E - 02857

Client Sample ID: BES 24 - 13   Lab Sample ID: 890-7167-13
Date Collected: 09/20/24 10:59   **Matrix: Solid**
Date Received: 09/25/24 16:44
Sample Depth: 4.5'

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/26/24 14:15	09/27/24 15:42	1
Diesel Range Organics (Over C10-C28)	**80.6**		50.0		mg/Kg		09/26/24 14:15	09/27/24 15:42	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/26/24 14:15	09/27/24 15:42	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	*102*		*70 - 130*				*09/26/24 14:15*	*09/27/24 15:42*	*1*
o-Terphenyl	*108*		*70 - 130*				*09/26/24 14:15*	*09/27/24 15:42*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**6880**		50.2		mg/Kg			09/27/24 11:11	10

Client Sample ID: BES 24 - 14   Lab Sample ID: 890-7167-14
Date Collected: 09/20/24 11:04   **Matrix: Solid**
Date Received: 09/25/24 16:44
Sample Depth: 4.5'

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		09/27/24 09:28	09/27/24 16:52	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		09/27/24 09:28	09/27/24 16:52	1
Toluene	<0.00201	U	0.00201		mg/Kg		09/27/24 09:28	09/27/24 16:52	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		09/27/24 09:28	09/27/24 16:52	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		09/27/24 09:28	09/27/24 16:52	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		09/27/24 09:28	09/27/24 16:52	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*				*09/27/24 09:28*	*09/27/24 16:52*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*				*09/27/24 09:28*	*09/27/24 16:52*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			09/27/24 16:52	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**106**		49.8		mg/Kg			09/27/24 17:32	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		09/26/24 14:15	09/27/24 17:32	1
Diesel Range Organics (Over C10-C28)	**106**		49.8		mg/Kg		09/26/24 14:15	09/27/24 17:32	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		09/26/24 14:15	09/27/24 17:32	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	*113*		*70 - 130*				*09/26/24 14:15*	*09/27/24 17:32*	*1*
o-Terphenyl	*118*		*70 - 130*				*09/26/24 14:15*	*09/27/24 17:32*	*1*

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Client Sample Results

Client: Vertex
Project/Site: SPUD 16 10H

Job ID: 890-7167-1
SDG: 23 E - 02857

Client Sample ID: BES 24 - 14
Date Collected: 09/20/24 11:04
Date Received: 09/25/24 16:44
Sample Depth: 4.5'

Lab Sample ID: 890-7167-14
Matrix: Solid

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2980		50.1		mg/Kg			09/27/24 11:27	10

Client Sample ID: BES 24 - 15
Date Collected: 09/20/24 11:10
Date Received: 09/25/24 16:44
Sample Depth: 4.5'

Lab Sample ID: 890-7167-15
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		09/27/24 09:28	09/27/24 17:12	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		09/27/24 09:28	09/27/24 17:12	1
Toluene	<0.00202	U	0.00202		mg/Kg		09/27/24 09:28	09/27/24 17:12	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		09/27/24 09:28	09/27/24 17:12	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		09/27/24 09:28	09/27/24 17:12	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		09/27/24 09:28	09/27/24 17:12	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		70 - 130				09/27/24 09:28	09/27/24 17:12	1
1,4-Difluorobenzene (Surr)	101		70 - 130				09/27/24 09:28	09/27/24 17:12	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			09/27/24 17:12	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			09/27/24 17:52	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		09/26/24 14:15	09/27/24 17:52	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/26/24 14:15	09/27/24 17:52	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/26/24 14:15	09/27/24 17:52	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	99		70 - 130				09/26/24 14:15	09/27/24 17:52	1
o-Terphenyl	105		70 - 130				09/26/24 14:15	09/27/24 17:52	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7440		99.2		mg/Kg			09/27/24 11:32	20

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Client Sample Results

Client: Vertex   Job ID: 890-7167-1
Project/Site: SPUD 16 10H   SDG: 23 E - 02857

Client Sample ID: BES 24 - 16   Lab Sample ID: 890-7167-16
Date Collected: 09/20/24 11:14   **Matrix: Solid**
Date Received: 09/25/24 16:44
Sample Depth: 1'

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/27/24 09:28	09/27/24 17:33	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/27/24 09:28	09/27/24 17:33	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/27/24 09:28	09/27/24 17:33	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/27/24 09:28	09/27/24 17:33	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/27/24 09:28	09/27/24 17:33	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/27/24 09:28	09/27/24 17:33	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	111		70 - 130				09/27/24 09:28	09/27/24 17:33	1
1,4-Difluorobenzene (Surr)	102		70 - 130				09/27/24 09:28	09/27/24 17:33	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			09/27/24 17:33	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			09/27/24 18:12	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/26/24 14:15	09/27/24 18:12	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/26/24 14:15	09/27/24 18:12	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/26/24 14:15	09/27/24 18:12	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	99		70 - 130				09/26/24 14:15	09/27/24 18:12	1
o-Terphenyl	104		70 - 130				09/26/24 14:15	09/27/24 18:12	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**7070**		99.2		mg/Kg			09/27/24 11:38	20

Client Sample ID: BES 24 - 17   Lab Sample ID: 890-7167-17
Date Collected: 09/20/24 11:19   **Matrix: Solid**
Date Received: 09/25/24 16:44
Sample Depth: 1'

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/27/24 09:28	09/27/24 17:53	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/27/24 09:28	09/27/24 17:53	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/27/24 09:28	09/27/24 17:53	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/27/24 09:28	09/27/24 17:53	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/27/24 09:28	09/27/24 17:53	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/27/24 09:28	09/27/24 17:53	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	114		70 - 130				09/27/24 09:28	09/27/24 17:53	1

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Client Sample Results

Client: Vertex
Project/Site: SPUD 16 10H

Job ID: 890-7167-1
SDG: 23 E - 02857

Client Sample ID: BES 24 - 17
Date Collected: 09/20/24 11:19
Date Received: 09/25/24 16:44
Sample Depth: 1'

Lab Sample ID: 890-7167-17
Matrix: Solid

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

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	99		70 - 130			09/27/24 09:28	09/27/24 17:53	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			09/27/24 17:53	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.7	U	49.7		mg/Kg			09/27/24 18:33	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.7	U	49.7		mg/Kg		09/26/24 14:15	09/27/24 18:33	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7		mg/Kg		09/26/24 14:15	09/27/24 18:33	1
Oil Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		09/26/24 14:15	09/27/24 18:33	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	106		70 - 130			09/26/24 14:15	09/27/24 18:33	1
o-Terphenyl	113		70 - 130			09/26/24 14:15	09/27/24 18:33	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**10700**		99.0		mg/Kg			09/27/24 11:43	20

Client Sample ID: BES 24 - 18
Date Collected: 09/20/24 11:24
Date Received: 09/25/24 16:44
Sample Depth: 1'

Lab Sample ID: 890-7167-18
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		09/27/24 09:28	09/27/24 18:14	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		09/27/24 09:28	09/27/24 18:14	1
Toluene	<0.00201	U	0.00201		mg/Kg		09/27/24 09:28	09/27/24 18:14	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		09/27/24 09:28	09/27/24 18:14	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		09/27/24 09:28	09/27/24 18:14	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		09/27/24 09:28	09/27/24 18:14	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 130			09/27/24 09:28	09/27/24 18:14	1
1,4-Difluorobenzene (Surr)	104		70 - 130			09/27/24 09:28	09/27/24 18:14	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			09/27/24 18:14	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			09/27/24 18:53	1

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Client Sample Results

Client: Vertex
Project/Site: SPUD 16 10H

Job ID: 890-7167-1
SDG: 23 E - 02857

Client Sample ID: BES 24 - 18
Date Collected: 09/20/24 11:24
Date Received: 09/25/24 16:44
Sample Depth: 1'

Lab Sample ID: 890-7167-18
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/26/24 14:15	09/27/24 18:53	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/26/24 14:15	09/27/24 18:53	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/26/24 14:15	09/27/24 18:53	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	107		70 - 130				09/26/24 14:15	09/27/24 18:53	1
o-Terphenyl	113		70 - 130				09/26/24 14:15	09/27/24 18:53	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**7730**		99.0		mg/Kg			09/27/24 11:48	20

Client Sample ID: BES 24 - 19
Date Collected: 09/20/24 11:27
Date Received: 09/25/24 16:44
Sample Depth: 1'

Lab Sample ID: 890-7167-19
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/27/24 09:28	09/27/24 18:34	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/27/24 09:28	09/27/24 18:34	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/27/24 09:28	09/27/24 18:34	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/27/24 09:28	09/27/24 18:34	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/27/24 09:28	09/27/24 18:34	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/27/24 09:28	09/27/24 18:34	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	112		70 - 130				09/27/24 09:28	09/27/24 18:34	1
1,4-Difluorobenzene (Surr)	98		70 - 130				09/27/24 09:28	09/27/24 18:34	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			09/27/24 18:34	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**121**		49.8		mg/Kg			09/27/24 19:13	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		09/26/24 14:15	09/27/24 19:13	1
Diesel Range Organics (Over C10-C28)	**121**		49.8		mg/Kg		09/26/24 14:15	09/27/24 19:13	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		09/26/24 14:15	09/27/24 19:13	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	108		70 - 130				09/26/24 14:15	09/27/24 19:13	1
o-Terphenyl	113		70 - 130				09/26/24 14:15	09/27/24 19:13	1

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Client Sample Results

Client: Vertex
Project/Site: SPUD 16 10H

Job ID: 890-7167-1
SDG: 23 E - 02857

Client Sample ID: BES 24 - 19
Date Collected: 09/20/24 11:27
Date Received: 09/25/24 16:44
Sample Depth: 1'

Lab Sample ID: 890-7167-19
Matrix: Solid

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4320		50.4		mg/Kg			09/27/24 11:54	10

Client Sample ID: BES 24 - 20
Date Collected: 09/20/24 11:34
Date Received: 09/25/24 16:44
Sample Depth: 1'

Lab Sample ID: 890-7167-20
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/27/24 09:28	09/27/24 18:55	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/27/24 09:28	09/27/24 18:55	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/27/24 09:28	09/27/24 18:55	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		09/27/24 09:28	09/27/24 18:55	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		09/27/24 09:28	09/27/24 18:55	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/27/24 09:28	09/27/24 18:55	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		70 - 130				09/27/24 09:28	09/27/24 18:55	1
1,4-Difluorobenzene (Surr)	102		70 - 130				09/27/24 09:28	09/27/24 18:55	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			09/27/24 18:55	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			09/27/24 19:34	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		09/26/24 14:15	09/27/24 19:34	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		09/26/24 14:15	09/27/24 19:34	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		09/26/24 14:15	09/27/24 19:34	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	128		70 - 130				09/26/24 14:15	09/27/24 19:34	1
o-Terphenyl	136	S1+	70 - 130				09/26/24 14:15	09/27/24 19:34	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3040		25.2		mg/Kg			09/27/24 12:18	5

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Client Sample Results

Client: Vertex
Project/Site: SPUD 16 10H

Job ID: 890-7167-1
SDG: 23 E - 02857

Client Sample ID: WES 24 - 01
Date Collected: 09/20/24 11:40
Date Received: 09/25/24 16:44
Sample Depth: 0 - 4.5'

Lab Sample ID: 890-7167-21
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		09/27/24 09:47	09/27/24 12:09	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		09/27/24 09:47	09/27/24 12:09	1
Toluene	<0.00201	U	0.00201		mg/Kg		09/27/24 09:47	09/27/24 12:09	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		09/27/24 09:47	09/27/24 12:09	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		09/27/24 09:47	09/27/24 12:09	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		09/27/24 09:47	09/27/24 12:09	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130				09/27/24 09:47	09/27/24 12:09	1
1,4-Difluorobenzene (Surr)	102		70 - 130				09/27/24 09:47	09/27/24 12:09	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			09/27/24 12:09	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			09/27/24 10:34	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/26/24 14:18	09/27/24 10:34	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/26/24 14:18	09/27/24 10:34	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/26/24 14:18	09/27/24 10:34	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	98		70 - 130				09/26/24 14:18	09/27/24 10:34	1
o-Terphenyl	120		70 - 130				09/26/24 14:18	09/27/24 10:34	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**5040**		101		mg/Kg			09/27/24 11:45	20

Client Sample ID: WES 24 - 02
Date Collected: 09/20/24 11:45
Date Received: 09/25/24 16:44
Sample Depth: 0 - 4.5'

Lab Sample ID: 890-7167-22
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/27/24 09:47	09/27/24 12:30	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/27/24 09:47	09/27/24 12:30	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/27/24 09:47	09/27/24 12:30	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		09/27/24 09:47	09/27/24 12:30	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		09/27/24 09:47	09/27/24 12:30	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/27/24 09:47	09/27/24 12:30	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	116		70 - 130				09/27/24 09:47	09/27/24 12:30	1

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Client Sample Results

Client: Vertex
Project/Site: SPUD 16 10H

Job ID: 890-7167-1
SDG: 23 E - 02857

Client Sample ID: WES 24 - 02
Date Collected: 09/20/24 11:45
Date Received: 09/25/24 16:44
Sample Depth: 0 - 4.5'

Lab Sample ID: 890-7167-22
Matrix: Solid

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

Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	102		70 - 130		09/27/24 09:47	09/27/24 12:30	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			09/27/24 12:30	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			09/27/24 11:36	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/26/24 14:18	09/27/24 11:36	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/26/24 14:18	09/27/24 11:36	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/26/24 14:18	09/27/24 11:36	1

Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
1-Chlorooctane	108		70 - 130		09/26/24 14:18	09/27/24 11:36	1
o-Terphenyl	131	S1+	70 - 130		09/26/24 14:18	09/27/24 11:36	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**5600**		101		mg/Kg			09/27/24 11:52	20

Client Sample ID: WES 24 - 03
Date Collected: 09/20/24 11:49
Date Received: 09/25/24 16:44
Sample Depth: 0 - 4.5'

Lab Sample ID: 890-7167-23
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/27/24 09:47	09/27/24 12:50	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/27/24 09:47	09/27/24 12:50	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/27/24 09:47	09/27/24 12:50	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/27/24 09:47	09/27/24 12:50	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/27/24 09:47	09/27/24 12:50	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/27/24 09:47	09/27/24 12:50	1

Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	126		70 - 130		09/27/24 09:47	09/27/24 12:50	1
1,4-Difluorobenzene (Surr)	112		70 - 130		09/27/24 09:47	09/27/24 12:50	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			09/27/24 12:50	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			09/27/24 11:56	1

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Client Sample Results

Client: Vertex

Project/Site: SPUD 16 10H

Job ID: 890-7167-1

SDG: 23 E - 02857

Client Sample ID: WES 24 - 03

Date Collected: 09/20/24 11:49

Date Received: 09/25/24 16:44

Sample Depth: 0 - 4.5'

Lab Sample ID: 890-7167-23

Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		09/26/24 14:18	09/27/24 11:56	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		09/26/24 14:18	09/27/24 11:56	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		09/26/24 14:18	09/27/24 11:56	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	123		70 - 130				09/26/24 14:18	09/27/24 11:56	1
o-Terphenyl	142	S1+	70 - 130				09/26/24 14:18	09/27/24 11:56	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**11800**		101		mg/Kg			09/27/24 11:58	20

Client Sample ID: WES 24 - 04

Date Collected: 09/20/24 11:59

Date Received: 09/25/24 16:44

Sample Depth: 0 - 4.5'

Lab Sample ID: 890-7167-24

Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		09/27/24 09:47	09/27/24 13:11	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		09/27/24 09:47	09/27/24 13:11	1
Toluene	<0.00201	U	0.00201		mg/Kg		09/27/24 09:47	09/27/24 13:11	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		09/27/24 09:47	09/27/24 13:11	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		09/27/24 09:47	09/27/24 13:11	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		09/27/24 09:47	09/27/24 13:11	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	150	S1+	70 - 130				09/27/24 09:47	09/27/24 13:11	1
1,4-Difluorobenzene (Surr)	118		70 - 130				09/27/24 09:47	09/27/24 13:11	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			09/27/24 13:11	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.7	U	49.7		mg/Kg			09/27/24 12:17	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.7	U	49.7		mg/Kg		09/26/24 14:18	09/27/24 12:17	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7		mg/Kg		09/26/24 14:18	09/27/24 12:17	1
Oil Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		09/26/24 14:18	09/27/24 12:17	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	101		70 - 130				09/26/24 14:18	09/27/24 12:17	1
o-Terphenyl	123		70 - 130				09/26/24 14:18	09/27/24 12:17	1

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Client Sample Results

Client: Vertex
Project/Site: SPUD 16 10H

Job ID: 890-7167-1
SDG: 23 E - 02857

Client Sample ID: WES 24 - 04
Date Collected: 09/20/24 11:59
Date Received: 09/25/24 16:44
Sample Depth: 0 - 4.5'

Lab Sample ID: 890-7167-24
Matrix: Solid

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**8390**		101		mg/Kg			09/27/24 12:05	20

Client Sample ID: WES 24 - 05
Date Collected: 09/20/24 11:57
Date Received: 09/25/24 16:44
Sample Depth: 0 - 4.5'

Lab Sample ID: 890-7167-25
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/27/24 09:47	09/27/24 13:31	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/27/24 09:47	09/27/24 13:31	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/27/24 09:47	09/27/24 13:31	1
Xylenes, Total	**0.00601**		0.00399		mg/Kg		09/27/24 09:47	09/27/24 13:31	1
m-Xylene & p-Xylene	**0.00601**		0.00399		mg/Kg		09/27/24 09:47	09/27/24 13:31	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/27/24 09:47	09/27/24 13:31	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*128*		*70 - 130*				*09/27/24 09:47*	*09/27/24 13:31*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*				*09/27/24 09:47*	*09/27/24 13:31*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.00601**		0.00399		mg/Kg			09/27/24 13:31	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			09/27/24 12:37	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/26/24 14:18	09/27/24 12:37	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/26/24 14:18	09/27/24 12:37	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/26/24 14:18	09/27/24 12:37	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	*113*		*70 - 130*				*09/26/24 14:18*	*09/27/24 12:37*	*1*
o-Terphenyl	*138*	*S1+*	*70 - 130*				*09/26/24 14:18*	*09/27/24 12:37*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2870**		49.8		mg/Kg			09/27/24 12:37	10

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Client Sample Results

Client: Vertex

Project/Site: SPUD 16 10H

Job ID: 890-7167-1

SDG: 23 E - 02857

Client Sample ID: WES 24 - 06

Date Collected: 09/20/24 12:10

Date Received: 09/25/24 16:44

Sample Depth: 0 - 1

Lab Sample ID: 890-7167-26

Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		09/27/24 09:47	09/27/24 13:52	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		09/27/24 09:47	09/27/24 13:52	1
Toluene	<0.00201	U	0.00201		mg/Kg		09/27/24 09:47	09/27/24 13:52	1
Xylenes, Total	**0.00460**		0.00402		mg/Kg		09/27/24 09:47	09/27/24 13:52	1
m-Xylene & p-Xylene	**0.00460**		0.00402		mg/Kg		09/27/24 09:47	09/27/24 13:52	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		09/27/24 09:47	09/27/24 13:52	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	128		70 - 130				09/27/24 09:47	09/27/24 13:52	1
1,4-Difluorobenzene (Surr)	113		70 - 130				09/27/24 09:47	09/27/24 13:52	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.00460**		0.00402		mg/Kg			09/27/24 13:52	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**161**		49.8		mg/Kg			09/27/24 12:58	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		09/26/24 14:18	09/27/24 12:58	1
Diesel Range Organics (Over C10-C28)	**161**		49.8		mg/Kg		09/26/24 14:18	09/27/24 12:58	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		09/26/24 14:18	09/27/24 12:58	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	109		70 - 130				09/26/24 14:18	09/27/24 12:58	1
o-Terphenyl	131	S1+	70 - 130				09/26/24 14:18	09/27/24 12:58	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2600**		24.8		mg/Kg			09/27/24 12:44	5

Client Sample ID: WES 24 - 07

Date Collected: 09/20/24 12:19

Date Received: 09/25/24 16:44

Sample Depth: 0 - 1

Lab Sample ID: 890-7167-27

Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		09/27/24 09:47	09/27/24 14:12	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		09/27/24 09:47	09/27/24 14:12	1
Toluene	<0.00201	U	0.00201		mg/Kg		09/27/24 09:47	09/27/24 14:12	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		09/27/24 09:47	09/27/24 14:12	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		09/27/24 09:47	09/27/24 14:12	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		09/27/24 09:47	09/27/24 14:12	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	152	S1+	70 - 130				09/27/24 09:47	09/27/24 14:12	1

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Client Sample Results

Client: Vertex
Project/Site: SPUD 16 10H

Job ID: 890-7167-1
SDG: 23 E - 02857

Client Sample ID: WES 24 - 07
Date Collected: 09/20/24 12:19
Date Received: 09/25/24 16:44
Sample Depth: 0 - 1

Lab Sample ID: 890-7167-27
Matrix: Solid

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

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	116		70 - 130			09/27/24 09:47	09/27/24 14:12	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			09/27/24 14:12	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			09/27/24 13:19	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		09/26/24 14:18	09/27/24 13:19	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/26/24 14:18	09/27/24 13:19	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/26/24 14:18	09/27/24 13:19	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	103		70 - 130			09/26/24 14:18	09/27/24 13:19	1
o-Terphenyl	122		70 - 130			09/26/24 14:18	09/27/24 13:19	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3140**		50.5		mg/Kg			09/27/24 12:50	10

Client Sample ID: WES 24 - 08
Date Collected: 09/20/24 12:31
Date Received: 09/25/24 16:44
Sample Depth: 0 - 1

Lab Sample ID: 890-7167-28
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/27/24 09:47	09/27/24 14:33	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/27/24 09:47	09/27/24 14:33	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/27/24 09:47	09/27/24 14:33	1
Xylenes, Total	**0.00502**		0.00399		mg/Kg		09/27/24 09:47	09/27/24 14:33	1
m-Xylene & p-Xylene	**0.00502**		0.00399		mg/Kg		09/27/24 09:47	09/27/24 14:33	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/27/24 09:47	09/27/24 14:33	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	131	S1+	70 - 130			09/27/24 09:47	09/27/24 14:33	1
1,4-Difluorobenzene (Surr)	111		70 - 130			09/27/24 09:47	09/27/24 14:33	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.00502**		0.00399		mg/Kg			09/27/24 14:33	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			09/27/24 13:39	1

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Client Sample Results

Client: Vertex
Project/Site: SPUD 16 10H

Job ID: 890-7167-1
SDG: 23 E - 02857

Client Sample ID: WES 24 - 08
Date Collected: 09/20/24 12:31
Date Received: 09/25/24 16:44
Sample Depth: 0 - 1

Lab Sample ID: 890-7167-28
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		09/26/24 14:18	09/27/24 13:39	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		09/26/24 14:18	09/27/24 13:39	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		09/26/24 14:18	09/27/24 13:39	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	2	S1-	70 - 130				09/26/24 14:18	09/27/24 13:39	1
o-Terphenyl	2	S1-	70 - 130				09/26/24 14:18	09/27/24 13:39	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4020**		49.7		mg/Kg			09/27/24 12:57	10

Client Sample ID: WES 24 - 09
Date Collected: 09/20/24 12:39
Date Received: 09/25/24 16:44
Sample Depth: 0 - 1

Lab Sample ID: 890-7167-29
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/27/24 09:47	09/27/24 14:53	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/27/24 09:47	09/27/24 14:53	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/27/24 09:47	09/27/24 14:53	1
Xylenes, Total	**0.00454**		0.00400		mg/Kg		09/27/24 09:47	09/27/24 14:53	1
m-Xylene & p-Xylene	**0.00454**		0.00400		mg/Kg		09/27/24 09:47	09/27/24 14:53	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/27/24 09:47	09/27/24 14:53	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	131	S1+	70 - 130				09/27/24 09:47	09/27/24 14:53	1
1,4-Difluorobenzene (Surr)	110		70 - 130				09/27/24 09:47	09/27/24 14:53	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.00454**		0.00400		mg/Kg			09/27/24 14:53	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**307**		49.7		mg/Kg			09/27/24 14:00	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.7	U	49.7		mg/Kg		09/26/24 14:18	09/27/24 14:00	1
Diesel Range Organics (Over C10-C28)	**243**		49.7		mg/Kg		09/26/24 14:18	09/27/24 14:00	1
Oil Range Organics (Over C28-C36)	**64.0**		49.7		mg/Kg		09/26/24 14:18	09/27/24 14:00	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	114		70 - 130				09/26/24 14:18	09/27/24 14:00	1
o-Terphenyl	131	S1+	70 - 130				09/26/24 14:18	09/27/24 14:00	1

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Client Sample Results

Client: Vertex
Project/Site: SPUD 16 10H

Job ID: 890-7167-1
SDG: 23 E - 02857

Client Sample ID: WES 24 - 09
Date Collected: 09/20/24 12:39
Date Received: 09/25/24 16:44
Sample Depth: 0 - 1

Lab Sample ID: 890-7167-29
Matrix: Solid

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	948		24.9		mg/Kg			09/27/24 13:03	5

Client Sample ID: WES 24 - 10
Date Collected: 09/20/24 12:48
Date Received: 09/25/24 16:44
Sample Depth: 0 - 1

Lab Sample ID: 890-7167-30
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		09/27/24 09:47	09/27/24 15:14	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		09/27/24 09:47	09/27/24 15:14	1
Toluene	<0.00199	U	0.00199		mg/Kg		09/27/24 09:47	09/27/24 15:14	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		09/27/24 09:47	09/27/24 15:14	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		09/27/24 09:47	09/27/24 15:14	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		09/27/24 09:47	09/27/24 15:14	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	125		70 - 130				09/27/24 09:47	09/27/24 15:14	1
1,4-Difluorobenzene (Surr)	110		70 - 130				09/27/24 09:47	09/27/24 15:14	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			09/27/24 15:14	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	223		50.0		mg/Kg			09/27/24 14:20	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/26/24 14:18	09/27/24 14:20	1
Diesel Range Organics (Over C10-C28)	172		50.0		mg/Kg		09/26/24 14:18	09/27/24 14:20	1
Oil Range Organics (Over C28-C36)	50.9		50.0		mg/Kg		09/26/24 14:18	09/27/24 14:20	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	117		70 - 130				09/26/24 14:18	09/27/24 14:20	1
o-Terphenyl	135	S1+	70 - 130				09/26/24 14:18	09/27/24 14:20	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2450		49.6		mg/Kg			09/27/24 13:10	10

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Surrogate Summary

Client: Vertex

Project/Site: SPUD 16 10H

Job ID: 890-7167-1

SDG: 23 E - 02857

Method: 8021B - Volatile Organic Compounds (GC)
Matrix: Solid
Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-49051-A-1-C MS	Matrix Spike	115	98
880-49051-A-1-D MSD	Matrix Spike Duplicate	113	99
880-49052-A-14-B MS	Matrix Spike	101	100
880-49052-A-14-C MSD	Matrix Spike Duplicate	106	98
890-7167-1	BES 24 - 01	115	99
890-7167-2	BES 24 - 02	114	98
890-7167-3	BES 24 - 03	116	99
890-7167-4	BES 24 - 04	116	99
890-7167-5	BES 24 - 05	116	99
890-7167-6	BES 24 - 06	119	99
890-7167-7	BES 24 - 07	119	99
890-7167-8	BES 24 - 08	121	100
890-7167-9	BES 24 - 09	116	99
890-7167-10	BES 24 - 10	117	99
890-7167-11	BES 24 - 11	114	100
890-7167-12	BES 24 - 12	106	102
890-7167-13	BES 24 - 13	109	98
890-7167-14	BES 24 - 14	108	102
890-7167-15	BES 24 - 15	105	101
890-7167-16	BES 24 - 16	111	102
890-7167-17	BES 24 - 17	114	99
890-7167-18	BES 24 - 18	104	104
890-7167-19	BES 24 - 19	112	98
890-7167-20	BES 24 - 20	106	102
890-7167-21	WES 24 - 01	98	102
890-7167-21 MS	WES 24 - 01	115	93
890-7167-21 MSD	WES 24 - 01	117	93
890-7167-22	WES 24 - 02	116	102
890-7167-23	WES 24 - 03	126	112
890-7167-24	WES 24 - 04	150 S1+	118
890-7167-25	WES 24 - 05	128	105
890-7167-26	WES 24 - 06	128	113
890-7167-27	WES 24 - 07	152 S1+	116
890-7167-28	WES 24 - 08	131 S1+	111
890-7167-29	WES 24 - 09	131 S1+	110
890-7167-30	WES 24 - 10	125	110
LCS 880-91893/1-A	Lab Control Sample	107	97
LCS 880-91902/1-A	Lab Control Sample	101	99
LCS 880-91911/1-A	Lab Control Sample	106	98
LCSD 880-91893/2-A	Lab Control Sample Dup	110	98
LCSD 880-91902/2-A	Lab Control Sample Dup	101	98
LCSD 880-91911/2-A	Lab Control Sample Dup	119	96
MB 880-91893/5-A	Method Blank	107	95
MB 880-91902/5-A	Method Blank	105	97
MB 880-91911/5-A	Method Blank	145 S1+	91

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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Surrogate Summary

Client: Vertex
Project/Site: SPUD 16 10H

Job ID: 890-7167-1
SDG: 23 E - 02857

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

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)				
890-7167-1	BES 24 - 01	119	124				
890-7167-1 MS	BES 24 - 01	99	94				
890-7167-1 MSD	BES 24 - 01	98	92				
890-7167-2	BES 24 - 02	102	107				
890-7167-3	BES 24 - 03	111	119				
890-7167-4	BES 24 - 04	106	112				
890-7167-5	BES 24 - 05	96	103				
890-7167-6	BES 24 - 06	99	108				
890-7167-7	BES 24 - 07	105	117				
890-7167-8	BES 24 - 08	114	123				
890-7167-9	BES 24 - 09	97	104				
890-7167-10	BES 24 - 10	106	111				
890-7167-11	BES 24 - 11	112	117				
890-7167-12	BES 24 - 12	103	110				
890-7167-13	BES 24 - 13	102	108				
890-7167-14	BES 24 - 14	113	118				
890-7167-15	BES 24 - 15	99	105				
890-7167-16	BES 24 - 16	99	104				
890-7167-17	BES 24 - 17	106	113				
890-7167-18	BES 24 - 18	107	113				
890-7167-19	BES 24 - 19	108	113				
890-7167-20	BES 24 - 20	128	136 S1+				
890-7167-21	WES 24 - 01	98	120				
890-7167-21 MS	WES 24 - 01	110	117				
890-7167-21 MSD	WES 24 - 01	111	120				
890-7167-22	WES 24 - 02	108	131 S1+				
890-7167-23	WES 24 - 03	123	142 S1+				
890-7167-24	WES 24 - 04	101	123				
890-7167-25	WES 24 - 05	113	138 S1+				
890-7167-26	WES 24 - 06	109	131 S1+				
890-7167-27	WES 24 - 07	103	122				
890-7167-28	WES 24 - 08	2 S1-	2 S1-				
890-7167-29	WES 24 - 09	114	131 S1+				
890-7167-30	WES 24 - 10	117	135 S1+				
LCS 880-91860/2-A	Lab Control Sample	92	90				
LCS 880-91861/2-A	Lab Control Sample	97	110				
LCSD 880-91860/3-A	Lab Control Sample Dup	85	83				
LCSD 880-91861/3-A	Lab Control Sample Dup	86	95				
MB 880-91861/1-A	Method Blank	138 S1+	176 S1+				

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

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

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	1CO1	OTPH1				
MB 880-91860/1-A	Method Blank						

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Surrogate Summary

Client: Vertex
Project/Site: SPUD 16 10H

Job ID: 890-7167-1
SDG: 23 E - 02857

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Vertex

Project/Site: SPUD 16 10H

Job ID: 890-7167-1

SDG: 23 E - 02857

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-91893/5-A
Matrix: Solid
Analysis Batch: 91814

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 91893

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/27/24 09:24	09/27/24 11:11	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/27/24 09:24	09/27/24 11:11	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/27/24 09:24	09/27/24 11:11	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/27/24 09:24	09/27/24 11:11	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/27/24 09:24	09/27/24 11:11	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/27/24 09:24	09/27/24 11:11	1

Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		70 - 130			09/27/24 09:24	09/27/24 11:11	1
1,4-Difluorobenzene (Surr)	95		70 - 130			09/27/24 09:24	09/27/24 11:11	1

Lab Sample ID: LCS 880-91893/1-A
Matrix: Solid
Analysis Batch: 91814

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 91893

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.09710		mg/Kg		97	70 - 130
Ethylbenzene	0.100	0.1030		mg/Kg		103	70 - 130
Toluene	0.100	0.1010		mg/Kg		101	70 - 130
m-Xylene & p-Xylene	0.200	0.2103		mg/Kg		105	70 - 130
o-Xylene	0.100	0.1044		mg/Kg		104	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	107		70 - 130
1,4-Difluorobenzene (Surr)	97		70 - 130

Lab Sample ID: LCSD 880-91893/2-A
Matrix: Solid
Analysis Batch: 91814

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 91893

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1034		mg/Kg		103	70 - 130	6	35
Ethylbenzene	0.100	0.1104		mg/Kg		110	70 - 130	7	35
Toluene	0.100	0.1080		mg/Kg		108	70 - 130	7	35
m-Xylene & p-Xylene	0.200	0.2249		mg/Kg		112	70 - 130	7	35
o-Xylene	0.100	0.1119		mg/Kg		112	70 - 130	7	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	110		70 - 130
1,4-Difluorobenzene (Surr)	98		70 - 130

Lab Sample ID: 880-49051-A-1-C MS
Matrix: Solid
Analysis Batch: 91814

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 91893

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00201	U	0.100	0.08773		mg/Kg		88	70 - 130
Ethylbenzene	<0.00201	U	0.100	0.09086		mg/Kg		91	70 - 130

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QC Sample Results

Client: Vertex
Project/Site: SPUD 16 10H

Job ID: 890-7167-1
SDG: 23 E - 02857

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

Lab Sample ID: 880-49051-A-1-C MS
Matrix: Solid
Analysis Batch: 91814

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 91893

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Toluene	<0.00201	U	0.100	0.09095		mg/Kg		91	70 - 130
m-Xylene & p-Xylene	<0.00402	U	0.200	0.1846		mg/Kg		92	70 - 130
o-Xylene	<0.00201	U	0.100	0.09097		mg/Kg		91	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	115		70 - 130
1,4-Difluorobenzene (Surr)	98		70 - 130

Lab Sample ID: 880-49051-A-1-D MSD
Matrix: Solid
Analysis Batch: 91814

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 91893

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U	0.100	0.08544		mg/Kg		85	70 - 130	3	35
Ethylbenzene	<0.00201	U	0.100	0.08912		mg/Kg		89	70 - 130	2	35
Toluene	<0.00201	U	0.100	0.08856		mg/Kg		89	70 - 130	3	35
m-Xylene & p-Xylene	<0.00402	U	0.200	0.1815		mg/Kg		91	70 - 130	2	35
o-Xylene	<0.00201	U	0.100	0.08984		mg/Kg		90	70 - 130	1	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	113		70 - 130
1,4-Difluorobenzene (Surr)	99		70 - 130

Lab Sample ID: MB 880-91902/5-A
Matrix: Solid
Analysis Batch: 91815

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 91902

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/27/24 09:28	09/27/24 11:22	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/27/24 09:28	09/27/24 11:22	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/27/24 09:28	09/27/24 11:22	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/27/24 09:28	09/27/24 11:22	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/27/24 09:28	09/27/24 11:22	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/27/24 09:28	09/27/24 11:22	1

Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		70 - 130			09/27/24 09:28	09/27/24 11:22	1
1,4-Difluorobenzene (Surr)	97		70 - 130			09/27/24 09:28	09/27/24 11:22	1

Lab Sample ID: LCS 880-91902/1-A
Matrix: Solid
Analysis Batch: 91815

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 91902

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.08827		mg/Kg		88	70 - 130
Ethylbenzene	0.100	0.08059		mg/Kg		81	70 - 130
Toluene	0.100	0.08290		mg/Kg		83	70 - 130
m-Xylene & p-Xylene	0.200	0.1721		mg/Kg		86	70 - 130

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9/30/2024

QC Sample Results

Client: Vertex   Job ID: 890-7167-1
Project/Site: SPUD 16 10H   SDG: 23 E - 02857

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

Lab Sample ID: LCS 880-91902/1-A   **Client Sample ID: Lab Control Sample**
Matrix: Solid   **Prep Type: Total/NA**
Analysis Batch: 91815   **Prep Batch: 91902**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
o-Xylene			0.100	0.08721		mg/Kg		87	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		70 - 130
1,4-Difluorobenzene (Surr)	99		70 - 130

Lab Sample ID: LCSD 880-91902/2-A   **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid   **Prep Type: Total/NA**
Analysis Batch: 91815   **Prep Batch: 91902**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09073		mg/Kg		91	70 - 130	3	35
Ethylbenzene			0.100	0.08305		mg/Kg		83	70 - 130	3	35
Toluene			0.100	0.08528		mg/Kg		85	70 - 130	3	35
m-Xylene & p-Xylene			0.200	0.1765		mg/Kg		88	70 - 130	2	35
o-Xylene			0.100	0.09172		mg/Kg		92	70 - 130	5	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		70 - 130
1,4-Difluorobenzene (Surr)	98		70 - 130

Lab Sample ID: 880-49052-A-14-B MS   **Client Sample ID: Matrix Spike**
Matrix: Solid   **Prep Type: Total/NA**
Analysis Batch: 91815   **Prep Batch: 91902**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits	
Benzene	<0.00201	U	0.100	0.09792		mg/Kg		98	70 - 130	
Ethylbenzene	<0.00201	U	0.100	0.09532		mg/Kg		95	70 - 130	
Toluene	<0.00201	U	0.100	0.09465		mg/Kg		95	70 - 130	
m-Xylene & p-Xylene	<0.00402	U	0.200	0.2012		mg/Kg		101	70 - 130	
o-Xylene	<0.00201	U	0.100	0.1025		mg/Kg		102	70 - 130	

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		70 - 130
1,4-Difluorobenzene (Surr)	100		70 - 130

Lab Sample ID: 880-49052-A-14-C MSD   **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid   **Prep Type: Total/NA**
Analysis Batch: 91815   **Prep Batch: 91902**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U	0.100	0.09260		mg/Kg		93	70 - 130	6	35
Ethylbenzene	<0.00201	U	0.100	0.09031		mg/Kg		90	70 - 130	5	35
Toluene	<0.00201	U	0.100	0.09079		mg/Kg		91	70 - 130	4	35
m-Xylene & p-Xylene	<0.00402	U	0.200	0.1901		mg/Kg		95	70 - 130	6	35
o-Xylene	<0.00201	U	0.100	0.09616		mg/Kg		96	70 - 130	6	35

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QC Sample Results

Client: Vertex   Job ID: 890-7167-1

Project/Site: SPUD 16 10H   SDG: 23 E - 02857

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

Lab Sample ID: 880-49052-A-14-C MSD   **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid   **Prep Type: Total/NA**
Analysis Batch: 91815   **Prep Batch: 91902**

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	106		70 - 130
1,4-Difluorobenzene (Surr)	98		70 - 130

Lab Sample ID: MB 880-91911/5-A   **Client Sample ID: Method Blank**
Matrix: Solid   **Prep Type: Total/NA**
Analysis Batch: 91882   **Prep Batch: 91911**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		09/27/24 09:47	09/27/24 11:41	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		09/27/24 09:47	09/27/24 11:41	1
Toluene	<0.00200	U	0.00200		mg/Kg		09/27/24 09:47	09/27/24 11:41	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		09/27/24 09:47	09/27/24 11:41	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		09/27/24 09:47	09/27/24 11:41	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		09/27/24 09:47	09/27/24 11:41	1

Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	145	S1+	70 - 130				09/27/24 09:47	09/27/24 11:41	1
1,4-Difluorobenzene (Surr)	91		70 - 130				09/27/24 09:47	09/27/24 11:41	1

Lab Sample ID: LCS 880-91911/1-A   **Client Sample ID: Lab Control Sample**
Matrix: Solid   **Prep Type: Total/NA**
Analysis Batch: 91882   **Prep Batch: 91911**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.09628		mg/Kg		96	70 - 130
Ethylbenzene	0.100	0.1019		mg/Kg		102	70 - 130
Toluene	0.100	0.09335		mg/Kg		93	70 - 130
m-Xylene & p-Xylene	0.200	0.2310		mg/Kg		116	70 - 130
o-Xylene	0.100	0.1052		mg/Kg		105	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	106		70 - 130
1,4-Difluorobenzene (Surr)	98		70 - 130

Lab Sample ID: LCSD 880-91911/2-A   **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid   **Prep Type: Total/NA**
Analysis Batch: 91882   **Prep Batch: 91911**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.09637		mg/Kg		96	70 - 130	0	35
Ethylbenzene	0.100	0.1191		mg/Kg		119	70 - 130	16	35
Toluene	0.100	0.09687		mg/Kg		97	70 - 130	4	35
m-Xylene & p-Xylene	0.200	0.2540		mg/Kg		127	70 - 130	9	35
o-Xylene	0.100	0.1132		mg/Kg		113	70 - 130	7	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	119		70 - 130

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QC Sample Results

Client: Vertex

Project/Site: SPUD 16 10H

Job ID: 890-7167-1

SDG: 23 E - 02857

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

Lab Sample ID: LCSD 880-91911/2-A　　　**Client Sample ID: Lab Control Sample Dup**
Matrix: Solid　　　**Prep Type: Total/NA**
Analysis Batch: 91882　　　**Prep Batch: 91911**

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

Lab Sample ID: 890-7167-21 MS　　　**Client Sample ID: WES 24 - 01**
Matrix: Solid　　　**Prep Type: Total/NA**
Analysis Batch: 91882　　　**Prep Batch: 91911**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits	
Benzene	<0.00201	U	0.100	0.07898		mg/Kg		79	70 - 130	
Ethylbenzene	<0.00201	U	0.100	0.09058		mg/Kg		91	70 - 130	
Toluene	<0.00201	U	0.100	0.07882		mg/Kg		79	70 - 130	
m-Xylene & p-Xylene	<0.00402	U	0.200	0.2048		mg/Kg		101	70 - 130	
o-Xylene	<0.00201	U	0.100	0.09516		mg/Kg		93	70 - 130	

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	115		70 - 130
1,4-Difluorobenzene (Surr)	93		70 - 130

Lab Sample ID: 890-7167-21 MSD　　　**Client Sample ID: WES 24 - 01**
Matrix: Solid　　　**Prep Type: Total/NA**
Analysis Batch: 91882　　　**Prep Batch: 91911**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U	0.100	0.09211		mg/Kg		92	70 - 130	15	35
Ethylbenzene	<0.00201	U	0.100	0.09620		mg/Kg		96	70 - 130	6	35
Toluene	<0.00201	U	0.100	0.09060		mg/Kg		91	70 - 130	14	35
m-Xylene & p-Xylene	<0.00402	U	0.200	0.2132		mg/Kg		105	70 - 130	4	35
o-Xylene	<0.00201	U	0.100	0.1085		mg/Kg		107	70 - 130	13	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	117		70 - 130
1,4-Difluorobenzene (Surr)	93		70 - 130

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

Lab Sample ID: MB 880-91860/1-A　　　**Client Sample ID: Method Blank**
Matrix: Solid　　　**Prep Type: Total/NA**
Analysis Batch: 91875　　　**Prep Batch: 91860**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/26/24 14:15	09/27/24 08:10	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/26/24 14:15	09/27/24 08:10	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/26/24 14:15	09/27/24 08:10	1

Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane							09/26/24 14:15	09/27/24 08:10	1
o-Terphenyl							09/26/24 14:15	09/27/24 08:10	1

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QC Sample Results

Client: Vertex
Project/Site: SPUD 16 10H

Job ID: 890-7167-1
SDG: 23 E - 02857

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

Lab Sample ID: LCS 880-91860/2-A
Matrix: Solid
Analysis Batch: 91875

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 91860

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	1000	943.0		mg/Kg		94	70 - 130		
Diesel Range Organics (Over C10-C28)	1000	909.3		mg/Kg		91	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	92		70 - 130
o-Terphenyl	90		70 - 130

Lab Sample ID: LCSD 880-91860/3-A
Matrix: Solid
Analysis Batch: 91875

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 91860

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	906.7		mg/Kg		91	70 - 130	4	20
Diesel Range Organics (Over C10-C28)	1000	897.8		mg/Kg		90	70 - 130	1	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	85		70 - 130
o-Terphenyl	83		70 - 130

Lab Sample ID: 890-7167-1 MS
Matrix: Solid
Analysis Batch: 91875

Client Sample ID: BES 24 - 01
Prep Type: Total/NA
Prep Batch: 91860

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits	
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	998	803.8		mg/Kg		77	70 - 130	
Diesel Range Organics (Over C10-C28)	<49.9	U	998	931.7		mg/Kg		91	70 - 130	

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	99		70 - 130
o-Terphenyl	94		70 - 130

Lab Sample ID: 890-7167-1 MSD
Matrix: Solid
Analysis Batch: 91875

Client Sample ID: BES 24 - 01
Prep Type: Total/NA
Prep Batch: 91860

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	998	803.3		mg/Kg		77	70 - 130	0	20
Diesel Range Organics (Over C10-C28)	<49.9	U	998	930.1		mg/Kg		91	70 - 130	0	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	98		70 - 130

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QC Sample Results

Client: Vertex	Job ID: 890-7167-1
Project/Site: SPUD 16 10H	SDG: 23 E - 02857

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

Lab Sample ID: 890-7167-1 MSD **Client Sample ID: BES 24 - 01**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 91875 **Prep Batch: 91860**

Surrogate	MSD %Recovery	MSD Qualifier	Limits
o-Terphenyl	92		70 - 130

Lab Sample ID: MB 880-91861/1-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 91877 **Prep Batch: 91861**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		09/26/24 14:18	09/27/24 08:10	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		09/26/24 14:18	09/27/24 08:10	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		09/26/24 14:18	09/27/24 08:10	1

Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	138	S1+	70 - 130			09/26/24 14:18	09/27/24 08:10	1
o-Terphenyl	176	S1+	70 - 130			09/26/24 14:18	09/27/24 08:10	1

Lab Sample ID: LCS 880-91861/2-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 91877 **Prep Batch: 91861**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1128		mg/Kg		113	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1163		mg/Kg		116	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	97		70 - 130
o-Terphenyl	110		70 - 130

Lab Sample ID: LCSD 880-91861/3-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 91877 **Prep Batch: 91861**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1079		mg/Kg		108	70 - 130	4	20
Diesel Range Organics (Over C10-C28)	1000	1090		mg/Kg		109	70 - 130	7	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	86		70 - 130
o-Terphenyl	95		70 - 130

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QC Sample Results

Client: Vertex

Project/Site: SPUD 16 10H

Job ID: 890-7167-1

SDG: 23 E - 02857

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

Lab Sample ID: 890-7167-21 MS
Matrix: Solid
Analysis Batch: 91877

Client Sample ID: WES 24 - 01
Prep Type: Total/NA
Prep Batch: 91861

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	1015		mg/Kg		100	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U	998	1131		mg/Kg		111	70 - 130		

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	110		70 - 130
o-Terphenyl	117		70 - 130

Lab Sample ID: 890-7167-21 MSD
Matrix: Solid
Analysis Batch: 91877

Client Sample ID: WES 24 - 01
Prep Type: Total/NA
Prep Batch: 91861

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	1039		mg/Kg		102	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	<50.0	U	998	1151		mg/Kg		113	70 - 130	2	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	111		70 - 130
o-Terphenyl	120		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-91880/1-A
Matrix: Solid
Analysis Batch: 91912

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			09/27/24 09:11	1

Lab Sample ID: LCS 880-91880/2-A
Matrix: Solid
Analysis Batch: 91912

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	249.5		mg/Kg		100	90 - 110		

Lab Sample ID: LCSD 880-91880/3-A
Matrix: Solid
Analysis Batch: 91912

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	245.9		mg/Kg		98	90 - 110	1	20

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QC Sample Results

Client: Vertex
Project/Site: SPUD 16 10H

Job ID: 890-7167-1
SDG: 23 E - 02857

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-7167-1 MS
Matrix: Solid
Analysis Batch: 91912

Client Sample ID: BES 24 - 01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	6140		5020	11220		mg/Kg		101	90 - 110		

Lab Sample ID: 890-7167-1 MSD
Matrix: Solid
Analysis Batch: 91912

Client Sample ID: BES 24 - 01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	6140		5020	11170		mg/Kg		100	90 - 110	0	20

Lab Sample ID: 890-7167-11 MS
Matrix: Solid
Analysis Batch: 91912

Client Sample ID: BES 24 - 11
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	5020		4980	10180		mg/Kg		104	90 - 110		

Lab Sample ID: 890-7167-11 MSD
Matrix: Solid
Analysis Batch: 91912

Client Sample ID: BES 24 - 11
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	5020		4980	10100		mg/Kg		102	90 - 110	1	20

Lab Sample ID: MB 880-91881/1-A
Matrix: Solid
Analysis Batch: 91915

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			09/27/24 11:11	1

Lab Sample ID: LCS 880-91881/2-A
Matrix: Solid
Analysis Batch: 91915

Client Sample ID: Lab Control Sample
Prep Type: Soluble

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

Lab Sample ID: LCSD 880-91881/3-A
Matrix: Solid
Analysis Batch: 91915

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	246.4		mg/Kg		99	90 - 110	1	20

Lab Sample ID: 890-7167-20 MS
Matrix: Solid
Analysis Batch: 91915

Client Sample ID: BES 24 - 20
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	3040		1260	4302		mg/Kg		100	90 - 110		

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QC Sample Results

Client: Vertex
Project/Site: SPUD 16 10H

Job ID: 890-7167-1
SDG: 23 E - 02857

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: 890-7167-20 MSD
Matrix: Solid
Analysis Batch: 91915

Client Sample ID: BES 24 - 20
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	3040		1260	4291		mg/Kg		99	90 - 110	0	20

Lab Sample ID: 890-7167-30 MS
Matrix: Solid
Analysis Batch: 91915

Client Sample ID: WES 24 - 10
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	2450		2480	4869		mg/Kg		97	90 - 110		

Lab Sample ID: 890-7167-30 MSD
Matrix: Solid
Analysis Batch: 91915

Client Sample ID: WES 24 - 10
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	2450		2480	4853		mg/Kg		97	90 - 110	0	20

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QC Association Summary

Client: Vertex
Project/Site: SPUD 16 10H

Job ID: 890-7167-1
SDG: 23 E - 02857

GC VOA

Analysis Batch: 91814

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7167-1	BES 24 - 01	Total/NA	Solid	8021B	91893
890-7167-2	BES 24 - 02	Total/NA	Solid	8021B	91893
890-7167-3	BES 24 - 03	Total/NA	Solid	8021B	91893
890-7167-4	BES 24 - 04	Total/NA	Solid	8021B	91893
890-7167-5	BES 24 - 05	Total/NA	Solid	8021B	91893
890-7167-6	BES 24 - 06	Total/NA	Solid	8021B	91893
890-7167-7	BES 24 - 07	Total/NA	Solid	8021B	91893
890-7167-8	BES 24 - 08	Total/NA	Solid	8021B	91893
890-7167-9	BES 24 - 09	Total/NA	Solid	8021B	91893
890-7167-10	BES 24 - 10	Total/NA	Solid	8021B	91893
MB 880-91893/5-A	Method Blank	Total/NA	Solid	8021B	91893
LCS 880-91893/1-A	Lab Control Sample	Total/NA	Solid	8021B	91893
LCSD 880-91893/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	91893
880-49051-A-1-C MS	Matrix Spike	Total/NA	Solid	8021B	91893
880-49051-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	91893

Analysis Batch: 91815

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7167-11	BES 24 - 11	Total/NA	Solid	8021B	91902
890-7167-12	BES 24 - 12	Total/NA	Solid	8021B	91902
890-7167-13	BES 24 - 13	Total/NA	Solid	8021B	91902
890-7167-14	BES 24 - 14	Total/NA	Solid	8021B	91902
890-7167-15	BES 24 - 15	Total/NA	Solid	8021B	91902
890-7167-16	BES 24 - 16	Total/NA	Solid	8021B	91902
890-7167-17	BES 24 - 17	Total/NA	Solid	8021B	91902
890-7167-18	BES 24 - 18	Total/NA	Solid	8021B	91902
890-7167-19	BES 24 - 19	Total/NA	Solid	8021B	91902
890-7167-20	BES 24 - 20	Total/NA	Solid	8021B	91902
MB 880-91902/5-A	Method Blank	Total/NA	Solid	8021B	91902
LCS 880-91902/1-A	Lab Control Sample	Total/NA	Solid	8021B	91902
LCSD 880-91902/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	91902
880-49052-A-14-B MS	Matrix Spike	Total/NA	Solid	8021B	91902
880-49052-A-14-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	91902

Analysis Batch: 91882

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7167-21	WES 24 - 01	Total/NA	Solid	8021B	91911
890-7167-22	WES 24 - 02	Total/NA	Solid	8021B	91911
890-7167-23	WES 24 - 03	Total/NA	Solid	8021B	91911
890-7167-24	WES 24 - 04	Total/NA	Solid	8021B	91911
890-7167-25	WES 24 - 05	Total/NA	Solid	8021B	91911
890-7167-26	WES 24 - 06	Total/NA	Solid	8021B	91911
890-7167-27	WES 24 - 07	Total/NA	Solid	8021B	91911
890-7167-28	WES 24 - 08	Total/NA	Solid	8021B	91911
890-7167-29	WES 24 - 09	Total/NA	Solid	8021B	91911
890-7167-30	WES 24 - 10	Total/NA	Solid	8021B	91911
MB 880-91911/5-A	Method Blank	Total/NA	Solid	8021B	91911
LCS 880-91911/1-A	Lab Control Sample	Total/NA	Solid	8021B	91911
LCSD 880-91911/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	91911
890-7167-21 MS	WES 24 - 01	Total/NA	Solid	8021B	91911
890-7167-21 MSD	WES 24 - 01	Total/NA	Solid	8021B	91911

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QC Association Summary

Client: Vertex

Project/Site: SPUD 16 10H

Job ID: 890-7167-1

SDG: 23 E - 02857

GC VOA

Prep Batch: 91893

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7167-1	BES 24 - 01	Total/NA	Solid	5035	
890-7167-2	BES 24 - 02	Total/NA	Solid	5035	
890-7167-3	BES 24 - 03	Total/NA	Solid	5035	
890-7167-4	BES 24 - 04	Total/NA	Solid	5035	
890-7167-5	BES 24 - 05	Total/NA	Solid	5035	
890-7167-6	BES 24 - 06	Total/NA	Solid	5035	
890-7167-7	BES 24 - 07	Total/NA	Solid	5035	
890-7167-8	BES 24 - 08	Total/NA	Solid	5035	
890-7167-9	BES 24 - 09	Total/NA	Solid	5035	
890-7167-10	BES 24 - 10	Total/NA	Solid	5035	
MB 880-91893/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-91893/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-91893/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-49051-A-1-C MS	Matrix Spike	Total/NA	Solid	5035	
880-49051-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 91902

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7167-11	BES 24 - 11	Total/NA	Solid	5035	
890-7167-12	BES 24 - 12	Total/NA	Solid	5035	
890-7167-13	BES 24 - 13	Total/NA	Solid	5035	
890-7167-14	BES 24 - 14	Total/NA	Solid	5035	
890-7167-15	BES 24 - 15	Total/NA	Solid	5035	
890-7167-16	BES 24 - 16	Total/NA	Solid	5035	
890-7167-17	BES 24 - 17	Total/NA	Solid	5035	
890-7167-18	BES 24 - 18	Total/NA	Solid	5035	
890-7167-19	BES 24 - 19	Total/NA	Solid	5035	
890-7167-20	BES 24 - 20	Total/NA	Solid	5035	
MB 880-91902/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-91902/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-91902/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-49052-A-14-B MS	Matrix Spike	Total/NA	Solid	5035	
880-49052-A-14-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 91911

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7167-21	WES 24 - 01	Total/NA	Solid	5035	
890-7167-22	WES 24 - 02	Total/NA	Solid	5035	
890-7167-23	WES 24 - 03	Total/NA	Solid	5035	
890-7167-24	WES 24 - 04	Total/NA	Solid	5035	
890-7167-25	WES 24 - 05	Total/NA	Solid	5035	
890-7167-26	WES 24 - 06	Total/NA	Solid	5035	
890-7167-27	WES 24 - 07	Total/NA	Solid	5035	
890-7167-28	WES 24 - 08	Total/NA	Solid	5035	
890-7167-29	WES 24 - 09	Total/NA	Solid	5035	
890-7167-30	WES 24 - 10	Total/NA	Solid	5035	
MB 880-91911/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-91911/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-91911/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-7167-21 MS	WES 24 - 01	Total/NA	Solid	5035	
890-7167-21 MSD	WES 24 - 01	Total/NA	Solid	5035	

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QC Association Summary

Client: Vertex
Project/Site: SPUD 16 10H

Job ID: 890-7167-1
SDG: 23 E - 02857

GC VOA

Analysis Batch: 91989

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7167-1	BES 24 - 01	Total/NA	Solid	Total BTEX	
890-7167-2	BES 24 - 02	Total/NA	Solid	Total BTEX	
890-7167-3	BES 24 - 03	Total/NA	Solid	Total BTEX	
890-7167-4	BES 24 - 04	Total/NA	Solid	Total BTEX	
890-7167-5	BES 24 - 05	Total/NA	Solid	Total BTEX	
890-7167-6	BES 24 - 06	Total/NA	Solid	Total BTEX	
890-7167-7	BES 24 - 07	Total/NA	Solid	Total BTEX	
890-7167-8	BES 24 - 08	Total/NA	Solid	Total BTEX	
890-7167-9	BES 24 - 09	Total/NA	Solid	Total BTEX	
890-7167-10	BES 24 - 10	Total/NA	Solid	Total BTEX	
890-7167-11	BES 24 - 11	Total/NA	Solid	Total BTEX	
890-7167-12	BES 24 - 12	Total/NA	Solid	Total BTEX	
890-7167-13	BES 24 - 13	Total/NA	Solid	Total BTEX	
890-7167-14	BES 24 - 14	Total/NA	Solid	Total BTEX	
890-7167-15	BES 24 - 15	Total/NA	Solid	Total BTEX	
890-7167-16	BES 24 - 16	Total/NA	Solid	Total BTEX	
890-7167-17	BES 24 - 17	Total/NA	Solid	Total BTEX	
890-7167-18	BES 24 - 18	Total/NA	Solid	Total BTEX	
890-7167-19	BES 24 - 19	Total/NA	Solid	Total BTEX	
890-7167-20	BES 24 - 20	Total/NA	Solid	Total BTEX	
890-7167-21	WES 24 - 01	Total/NA	Solid	Total BTEX	
890-7167-22	WES 24 - 02	Total/NA	Solid	Total BTEX	
890-7167-23	WES 24 - 03	Total/NA	Solid	Total BTEX	
890-7167-24	WES 24 - 04	Total/NA	Solid	Total BTEX	
890-7167-25	WES 24 - 05	Total/NA	Solid	Total BTEX	
890-7167-26	WES 24 - 06	Total/NA	Solid	Total BTEX	
890-7167-27	WES 24 - 07	Total/NA	Solid	Total BTEX	
890-7167-28	WES 24 - 08	Total/NA	Solid	Total BTEX	
890-7167-29	WES 24 - 09	Total/NA	Solid	Total BTEX	
890-7167-30	WES 24 - 10	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 91860

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7167-1	BES 24 - 01	Total/NA	Solid	8015NM Prep	
890-7167-2	BES 24 - 02	Total/NA	Solid	8015NM Prep	
890-7167-3	BES 24 - 03	Total/NA	Solid	8015NM Prep	
890-7167-4	BES 24 - 04	Total/NA	Solid	8015NM Prep	
890-7167-5	BES 24 - 05	Total/NA	Solid	8015NM Prep	
890-7167-6	BES 24 - 06	Total/NA	Solid	8015NM Prep	
890-7167-7	BES 24 - 07	Total/NA	Solid	8015NM Prep	
890-7167-8	BES 24 - 08	Total/NA	Solid	8015NM Prep	
890-7167-9	BES 24 - 09	Total/NA	Solid	8015NM Prep	
890-7167-10	BES 24 - 10	Total/NA	Solid	8015NM Prep	
890-7167-11	BES 24 - 11	Total/NA	Solid	8015NM Prep	
890-7167-12	BES 24 - 12	Total/NA	Solid	8015NM Prep	
890-7167-13	BES 24 - 13	Total/NA	Solid	8015NM Prep	
890-7167-14	BES 24 - 14	Total/NA	Solid	8015NM Prep	
890-7167-15	BES 24 - 15	Total/NA	Solid	8015NM Prep	
890-7167-16	BES 24 - 16	Total/NA	Solid	8015NM Prep	

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9/30/2024

QC Association Summary

Client: Vertex
Project/Site: SPUD 16 10H

Job ID: 890-7167-1
SDG: 23 E - 02857

GC Semi VOA (Continued)

Prep Batch: 91860 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7167-17	BES 24 - 17	Total/NA	Solid	8015NM Prep	
890-7167-18	BES 24 - 18	Total/NA	Solid	8015NM Prep	
890-7167-19	BES 24 - 19	Total/NA	Solid	8015NM Prep	
890-7167-20	BES 24 - 20	Total/NA	Solid	8015NM Prep	
MB 880-91860/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-91860/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-91860/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-7167-1 MS	BES 24 - 01	Total/NA	Solid	8015NM Prep	
890-7167-1 MSD	BES 24 - 01	Total/NA	Solid	8015NM Prep	

Prep Batch: 91861

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7167-21	WES 24 - 01	Total/NA	Solid	8015NM Prep	
890-7167-22	WES 24 - 02	Total/NA	Solid	8015NM Prep	
890-7167-23	WES 24 - 03	Total/NA	Solid	8015NM Prep	
890-7167-24	WES 24 - 04	Total/NA	Solid	8015NM Prep	
890-7167-25	WES 24 - 05	Total/NA	Solid	8015NM Prep	
890-7167-26	WES 24 - 06	Total/NA	Solid	8015NM Prep	
890-7167-27	WES 24 - 07	Total/NA	Solid	8015NM Prep	
890-7167-28	WES 24 - 08	Total/NA	Solid	8015NM Prep	
890-7167-29	WES 24 - 09	Total/NA	Solid	8015NM Prep	
890-7167-30	WES 24 - 10	Total/NA	Solid	8015NM Prep	
MB 880-91861/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-91861/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-91861/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-7167-21 MS	WES 24 - 01	Total/NA	Solid	8015NM Prep	
890-7167-21 MSD	WES 24 - 01	Total/NA	Solid	8015NM Prep	

Analysis Batch: 91875

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7167-1	BES 24 - 01	Total/NA	Solid	8015B NM	91860
890-7167-2	BES 24 - 02	Total/NA	Solid	8015B NM	91860
890-7167-3	BES 24 - 03	Total/NA	Solid	8015B NM	91860
890-7167-4	BES 24 - 04	Total/NA	Solid	8015B NM	91860
890-7167-5	BES 24 - 05	Total/NA	Solid	8015B NM	91860
890-7167-6	BES 24 - 06	Total/NA	Solid	8015B NM	91860
890-7167-7	BES 24 - 07	Total/NA	Solid	8015B NM	91860
890-7167-8	BES 24 - 08	Total/NA	Solid	8015B NM	91860
890-7167-9	BES 24 - 09	Total/NA	Solid	8015B NM	91860
890-7167-10	BES 24 - 10	Total/NA	Solid	8015B NM	91860
890-7167-11	BES 24 - 11	Total/NA	Solid	8015B NM	91860
890-7167-12	BES 24 - 12	Total/NA	Solid	8015B NM	91860
890-7167-13	BES 24 - 13	Total/NA	Solid	8015B NM	91860
890-7167-14	BES 24 - 14	Total/NA	Solid	8015B NM	91860
890-7167-15	BES 24 - 15	Total/NA	Solid	8015B NM	91860
890-7167-16	BES 24 - 16	Total/NA	Solid	8015B NM	91860
890-7167-17	BES 24 - 17	Total/NA	Solid	8015B NM	91860
890-7167-18	BES 24 - 18	Total/NA	Solid	8015B NM	91860
890-7167-19	BES 24 - 19	Total/NA	Solid	8015B NM	91860
890-7167-20	BES 24 - 20	Total/NA	Solid	8015B NM	91860
MB 880-91860/1-A	Method Blank	Total/NA	Solid	8015B NM	91860

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QC Association Summary

Client: Vertex
Project/Site: SPUD 16 10H

Job ID: 890-7167-1
SDG: 23 E - 02857

GC Semi VOA (Continued)

Analysis Batch: 91875 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-91860/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	91860
LCSD 880-91860/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	91860
890-7167-1 MS	BES 24 - 01	Total/NA	Solid	8015B NM	91860
890-7167-1 MSD	BES 24 - 01	Total/NA	Solid	8015B NM	91860

Analysis Batch: 91877

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7167-21	WES 24 - 01	Total/NA	Solid	8015B NM	91861
890-7167-22	WES 24 - 02	Total/NA	Solid	8015B NM	91861
890-7167-23	WES 24 - 03	Total/NA	Solid	8015B NM	91861
890-7167-24	WES 24 - 04	Total/NA	Solid	8015B NM	91861
890-7167-25	WES 24 - 05	Total/NA	Solid	8015B NM	91861
890-7167-26	WES 24 - 06	Total/NA	Solid	8015B NM	91861
890-7167-27	WES 24 - 07	Total/NA	Solid	8015B NM	91861
890-7167-28	WES 24 - 08	Total/NA	Solid	8015B NM	91861
890-7167-29	WES 24 - 09	Total/NA	Solid	8015B NM	91861
890-7167-30	WES 24 - 10	Total/NA	Solid	8015B NM	91861
MB 880-91861/1-A	Method Blank	Total/NA	Solid	8015B NM	91861
LCS 880-91861/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	91861
LCSD 880-91861/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	91861
890-7167-21 MS	WES 24 - 01	Total/NA	Solid	8015B NM	91861
890-7167-21 MSD	WES 24 - 01	Total/NA	Solid	8015B NM	91861

Analysis Batch: 92100

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7167-1	BES 24 - 01	Total/NA	Solid	8015 NM	
890-7167-2	BES 24 - 02	Total/NA	Solid	8015 NM	
890-7167-3	BES 24 - 03	Total/NA	Solid	8015 NM	
890-7167-4	BES 24 - 04	Total/NA	Solid	8015 NM	
890-7167-5	BES 24 - 05	Total/NA	Solid	8015 NM	
890-7167-6	BES 24 - 06	Total/NA	Solid	8015 NM	
890-7167-7	BES 24 - 07	Total/NA	Solid	8015 NM	
890-7167-8	BES 24 - 08	Total/NA	Solid	8015 NM	
890-7167-9	BES 24 - 09	Total/NA	Solid	8015 NM	
890-7167-10	BES 24 - 10	Total/NA	Solid	8015 NM	
890-7167-11	BES 24 - 11	Total/NA	Solid	8015 NM	
890-7167-12	BES 24 - 12	Total/NA	Solid	8015 NM	
890-7167-13	BES 24 - 13	Total/NA	Solid	8015 NM	
890-7167-14	BES 24 - 14	Total/NA	Solid	8015 NM	
890-7167-15	BES 24 - 15	Total/NA	Solid	8015 NM	
890-7167-16	BES 24 - 16	Total/NA	Solid	8015 NM	
890-7167-17	BES 24 - 17	Total/NA	Solid	8015 NM	
890-7167-18	BES 24 - 18	Total/NA	Solid	8015 NM	
890-7167-19	BES 24 - 19	Total/NA	Solid	8015 NM	
890-7167-20	BES 24 - 20	Total/NA	Solid	8015 NM	
890-7167-21	WES 24 - 01	Total/NA	Solid	8015 NM	
890-7167-22	WES 24 - 02	Total/NA	Solid	8015 NM	
890-7167-23	WES 24 - 03	Total/NA	Solid	8015 NM	
890-7167-24	WES 24 - 04	Total/NA	Solid	8015 NM	
890-7167-25	WES 24 - 05	Total/NA	Solid	8015 NM	
890-7167-26	WES 24 - 06	Total/NA	Solid	8015 NM	

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QC Association Summary

Client: Vertex

Project/Site: SPUD 16 10H

Job ID: 890-7167-1

SDG: 23 E - 02857

GC Semi VOA (Continued)

Analysis Batch: 92100 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7167-27	WES 24 - 07	Total/NA	Solid	8015 NM	
890-7167-28	WES 24 - 08	Total/NA	Solid	8015 NM	
890-7167-29	WES 24 - 09	Total/NA	Solid	8015 NM	
890-7167-30	WES 24 - 10	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 91880

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7167-1	BES 24 - 01	Soluble	Solid	DI Leach	
890-7167-2	BES 24 - 02	Soluble	Solid	DI Leach	
890-7167-3	BES 24 - 03	Soluble	Solid	DI Leach	
890-7167-4	BES 24 - 04	Soluble	Solid	DI Leach	
890-7167-5	BES 24 - 05	Soluble	Solid	DI Leach	
890-7167-6	BES 24 - 06	Soluble	Solid	DI Leach	
890-7167-7	BES 24 - 07	Soluble	Solid	DI Leach	
890-7167-8	BES 24 - 08	Soluble	Solid	DI Leach	
890-7167-9	BES 24 - 09	Soluble	Solid	DI Leach	
890-7167-10	BES 24 - 10	Soluble	Solid	DI Leach	
890-7167-11	BES 24 - 11	Soluble	Solid	DI Leach	
890-7167-12	BES 24 - 12	Soluble	Solid	DI Leach	
890-7167-13	BES 24 - 13	Soluble	Solid	DI Leach	
890-7167-14	BES 24 - 14	Soluble	Solid	DI Leach	
890-7167-15	BES 24 - 15	Soluble	Solid	DI Leach	
890-7167-16	BES 24 - 16	Soluble	Solid	DI Leach	
890-7167-17	BES 24 - 17	Soluble	Solid	DI Leach	
890-7167-18	BES 24 - 18	Soluble	Solid	DI Leach	
890-7167-19	BES 24 - 19	Soluble	Solid	DI Leach	
MB 880-91880/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-91880/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-91880/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-7167-1 MS	BES 24 - 01	Soluble	Solid	DI Leach	
890-7167-1 MSD	BES 24 - 01	Soluble	Solid	DI Leach	
890-7167-11 MS	BES 24 - 11	Soluble	Solid	DI Leach	
890-7167-11 MSD	BES 24 - 11	Soluble	Solid	DI Leach	

Leach Batch: 91881

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7167-20	BES 24 - 20	Soluble	Solid	DI Leach	
890-7167-21	WES 24 - 01	Soluble	Solid	DI Leach	
890-7167-22	WES 24 - 02	Soluble	Solid	DI Leach	
890-7167-23	WES 24 - 03	Soluble	Solid	DI Leach	
890-7167-24	WES 24 - 04	Soluble	Solid	DI Leach	
890-7167-25	WES 24 - 05	Soluble	Solid	DI Leach	
890-7167-26	WES 24 - 06	Soluble	Solid	DI Leach	
890-7167-27	WES 24 - 07	Soluble	Solid	DI Leach	
890-7167-28	WES 24 - 08	Soluble	Solid	DI Leach	
890-7167-29	WES 24 - 09	Soluble	Solid	DI Leach	
890-7167-30	WES 24 - 10	Soluble	Solid	DI Leach	
MB 880-91881/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-91881/2-A	Lab Control Sample	Soluble	Solid	DI Leach	

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9/30/2024

QC Association Summary

Client: Vertex
Project/Site: SPUD 16 10H

Job ID: 890-7167-1
SDG: 23 E - 02857

HPLC/IC (Continued)

Leach Batch: 91881 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-91881/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-7167-20 MS	BES 24 - 20	Soluble	Solid	DI Leach	
890-7167-20 MSD	BES 24 - 20	Soluble	Solid	DI Leach	
890-7167-30 MS	WES 24 - 10	Soluble	Solid	DI Leach	
890-7167-30 MSD	WES 24 - 10	Soluble	Solid	DI Leach	

Analysis Batch: 91912

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7167-1	BES 24 - 01	Soluble	Solid	300.0	91880
890-7167-2	BES 24 - 02	Soluble	Solid	300.0	91880
890-7167-3	BES 24 - 03	Soluble	Solid	300.0	91880
890-7167-4	BES 24 - 04	Soluble	Solid	300.0	91880
890-7167-5	BES 24 - 05	Soluble	Solid	300.0	91880
890-7167-6	BES 24 - 06	Soluble	Solid	300.0	91880
890-7167-7	BES 24 - 07	Soluble	Solid	300.0	91880
890-7167-8	BES 24 - 08	Soluble	Solid	300.0	91880
890-7167-9	BES 24 - 09	Soluble	Solid	300.0	91880
890-7167-10	BES 24 - 10	Soluble	Solid	300.0	91880
890-7167-11	BES 24 - 11	Soluble	Solid	300.0	91880
890-7167-12	BES 24 - 12	Soluble	Solid	300.0	91880
890-7167-13	BES 24 - 13	Soluble	Solid	300.0	91880
890-7167-14	BES 24 - 14	Soluble	Solid	300.0	91880
890-7167-15	BES 24 - 15	Soluble	Solid	300.0	91880
890-7167-16	BES 24 - 16	Soluble	Solid	300.0	91880
890-7167-17	BES 24 - 17	Soluble	Solid	300.0	91880
890-7167-18	BES 24 - 18	Soluble	Solid	300.0	91880
890-7167-19	BES 24 - 19	Soluble	Solid	300.0	91880
MB 880-91880/1-A	Method Blank	Soluble	Solid	300.0	91880
LCS 880-91880/2-A	Lab Control Sample	Soluble	Solid	300.0	91880
LCSD 880-91880/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	91880
890-7167-1 MS	BES 24 - 01	Soluble	Solid	300.0	91880
890-7167-1 MSD	BES 24 - 01	Soluble	Solid	300.0	91880
890-7167-11 MS	BES 24 - 11	Soluble	Solid	300.0	91880
890-7167-11 MSD	BES 24 - 11	Soluble	Solid	300.0	91880

Analysis Batch: 91915

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7167-20	BES 24 - 20	Soluble	Solid	300.0	91881
890-7167-21	WES 24 - 01	Soluble	Solid	300.0	91881
890-7167-22	WES 24 - 02	Soluble	Solid	300.0	91881
890-7167-23	WES 24 - 03	Soluble	Solid	300.0	91881
890-7167-24	WES 24 - 04	Soluble	Solid	300.0	91881
890-7167-25	WES 24 - 05	Soluble	Solid	300.0	91881
890-7167-26	WES 24 - 06	Soluble	Solid	300.0	91881
890-7167-27	WES 24 - 07	Soluble	Solid	300.0	91881
890-7167-28	WES 24 - 08	Soluble	Solid	300.0	91881
890-7167-29	WES 24 - 09	Soluble	Solid	300.0	91881
890-7167-30	WES 24 - 10	Soluble	Solid	300.0	91881
MB 880-91881/1-A	Method Blank	Soluble	Solid	300.0	91881
LCS 880-91881/2-A	Lab Control Sample	Soluble	Solid	300.0	91881
LCSD 880-91881/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	91881

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9/30/2024

QC Association Summary

Client: Vertex

Project/Site: SPUD 16 10H

Job ID: 890-7167-1

SDG: 23 E - 02857

HPLC/IC (Continued)

Analysis Batch: 91915 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-7167-20 MS	BES 24 - 20	Soluble	Solid	300.0	91881
890-7167-20 MSD	BES 24 - 20	Soluble	Solid	300.0	91881
890-7167-30 MS	WES 24 - 10	Soluble	Solid	300.0	91881
890-7167-30 MSD	WES 24 - 10	Soluble	Solid	300.0	91881

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Lab Chronicle

Client: Vertex

Project/Site: SPUD 16 10H

Job ID: 890-7167-1

SDG: 23 E - 02857

Client Sample ID: BES 24 - 01

Date Collected: 09/20/24 10:04

Date Received: 09/25/24 16:44

Lab Sample ID: 890-7167-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	91893	09/27/24 09:24	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	91814	09/27/24 16:11	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			91989	09/27/24 16:11	SM	EET MID
Total/NA	Analysis	8015 NM		1			92100	09/27/24 10:34	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10.00 mL	91860	09/26/24 14:15	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	91875	09/27/24 10:34	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	91880	09/27/24 08:01	SA	EET MID
Soluble	Analysis	300.0		20	50 mL	50 mL	91912	09/27/24 09:33	SMC	EET MID

Client Sample ID: BES 24 - 02

Date Collected: 09/20/24 10:09

Date Received: 09/25/24 16:44

Lab Sample ID: 890-7167-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	91893	09/27/24 09:24	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	91814	09/27/24 16:32	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			91989	09/27/24 16:32	SM	EET MID
Total/NA	Analysis	8015 NM		1			92100	09/27/24 11:36	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10.00 mL	91860	09/26/24 14:15	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	91875	09/27/24 11:36	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	91880	09/27/24 08:01	SA	EET MID
Soluble	Analysis	300.0		20	50 mL	50 mL	91912	09/27/24 09:50	SMC	EET MID

Client Sample ID: BES 24 - 03

Date Collected: 09/20/24 10:14

Date Received: 09/25/24 16:44

Lab Sample ID: 890-7167-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	91893	09/27/24 09:24	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	91814	09/27/24 16:52	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			91989	09/27/24 16:52	SM	EET MID
Total/NA	Analysis	8015 NM		1			92100	09/27/24 11:56	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10.00 mL	91860	09/26/24 14:15	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	91875	09/27/24 11:56	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	91880	09/27/24 08:01	SA	EET MID
Soluble	Analysis	300.0		50	50 mL	50 mL	91912	09/27/24 09:55	SMC	EET MID

Client Sample ID: BES 24 - 04

Date Collected: 09/20/24 10:19

Date Received: 09/25/24 16:44

Lab Sample ID: 890-7167-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	91893	09/27/24 09:24	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	91814	09/27/24 17:12	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			91989	09/27/24 17:12	SM	EET MID

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Lab Chronicle

Client: Vertex

Project/Site: SPUD 16 10H

Job ID: 890-7167-1

SDG: 23 E - 02857

Client Sample ID: BES 24 - 04   Lab Sample ID: 890-7167-4
Date Collected: 09/20/24 10:19   **Matrix: Solid**
Date Received: 09/25/24 16:44

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			92100	09/27/24 12:17	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10.00 mL	91860	09/26/24 14:15	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	91875	09/27/24 12:17	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	91880	09/27/24 08:01	SA	EET MID
Soluble	Analysis	300.0		20	50 mL	50 mL	91912	09/27/24 10:00	SMC	EET MID

Client Sample ID: BES 24 - 05   Lab Sample ID: 890-7167-5
Date Collected: 09/20/24 10:22   **Matrix: Solid**
Date Received: 09/25/24 16:44

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	91893	09/27/24 09:24	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	91814	09/27/24 17:33	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			91989	09/27/24 17:33	SM	EET MID
Total/NA	Analysis	8015 NM		1			92100	09/27/24 12:37	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10.00 mL	91860	09/26/24 14:15	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	91875	09/27/24 12:37	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	91880	09/27/24 08:01	SA	EET MID
Soluble	Analysis	300.0		50	50 mL	50 mL	91912	09/27/24 10:06	SMC	EET MID

Client Sample ID: BES 24 - 06   Lab Sample ID: 890-7167-6
Date Collected: 09/20/24 10:25   **Matrix: Solid**
Date Received: 09/25/24 16:44

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	91893	09/27/24 09:24	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	91814	09/27/24 17:53	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			91989	09/27/24 17:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			92100	09/27/24 12:58	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10.00 mL	91860	09/26/24 14:15	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	91875	09/27/24 12:58	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	91880	09/27/24 08:01	SA	EET MID
Soluble	Analysis	300.0		20	50 mL	50 mL	91912	09/27/24 10:22	SMC	EET MID

Client Sample ID: BES 24 - 07   Lab Sample ID: 890-7167-7
Date Collected: 09/20/24 10:30   **Matrix: Solid**
Date Received: 09/25/24 16:44

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	91893	09/27/24 09:24	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	91814	09/27/24 18:14	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			91989	09/27/24 18:14	SM	EET MID
Total/NA	Analysis	8015 NM		1			92100	09/27/24 13:19	SM	EET MID
Total/NA	Prep	8015NM Prep			10.06 g	10.00 mL	91860	09/26/24 14:15	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	91875	09/27/24 13:19	SM	EET MID

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Lab Chronicle

Client: Vertex
Project/Site: SPUD 16 10H

Job ID: 890-7167-1
SDG: 23 E - 02857

Client Sample ID: BES 24 - 07
Date Collected: 09/20/24 10:30
Date Received: 09/25/24 16:44

Lab Sample ID: 890-7167-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.99 g	50 mL	91880	09/27/24 08:01	SA	EET MID
Soluble	Analysis	300.0		20	50 mL	50 mL	91912	09/27/24 10:27	SMC	EET MID

Client Sample ID: BES 24 - 08
Date Collected: 09/20/24 10:34
Date Received: 09/25/24 16:44

Lab Sample ID: 890-7167-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	91893	09/27/24 09:24	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	91814	09/27/24 18:34	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			91989	09/27/24 18:34	SM	EET MID
Total/NA	Analysis	8015 NM		1			92100	09/27/24 13:39	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10.00 mL	91860	09/26/24 14:15	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	91875	09/27/24 13:39	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	91880	09/27/24 08:01	SA	EET MID
Soluble	Analysis	300.0		20	50 mL	50 mL	91912	09/27/24 10:33	SMC	EET MID

Client Sample ID: BES 24 - 09
Date Collected: 09/20/24 10:38
Date Received: 09/25/24 16:44

Lab Sample ID: 890-7167-9
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	91893	09/27/24 09:24	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	91814	09/27/24 18:55	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			91989	09/27/24 18:55	SM	EET MID
Total/NA	Analysis	8015 NM		1			92100	09/27/24 14:00	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10.00 mL	91860	09/26/24 14:15	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	91875	09/27/24 14:00	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	91880	09/27/24 08:01	SA	EET MID
Soluble	Analysis	300.0		20	50 mL	50 mL	91912	09/27/24 10:38	SMC	EET MID

Client Sample ID: BES 24 - 10
Date Collected: 09/20/24 10:42
Date Received: 09/25/24 16:44

Lab Sample ID: 890-7167-10
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	91893	09/27/24 09:24	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	91814	09/27/24 19:15	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			91989	09/27/24 19:15	SM	EET MID
Total/NA	Analysis	8015 NM		1			92100	09/27/24 14:20	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10.00 mL	91860	09/26/24 14:15	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	91875	09/27/24 14:20	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	91880	09/27/24 08:01	SA	EET MID
Soluble	Analysis	300.0		20	50 mL	50 mL	91912	09/27/24 10:43	SMC	EET MID

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Lab Chronicle

Client: Vertex

Project/Site: SPUD 16 10H

Job ID: 890-7167-1

SDG: 23 E - 02857

Client Sample ID: BES 24 - 11
Date Collected: 09/20/24 10:46
Date Received: 09/25/24 16:44

Lab Sample ID: 890-7167-11
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	91902	09/27/24 09:28	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	91815	09/27/24 14:48	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			91989	09/27/24 14:48	SM	EET MID
Total/NA	Analysis	8015 NM		1			92100	09/27/24 15:01	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10.00 mL	91860	09/26/24 14:15	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	91875	09/27/24 15:01	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	91880	09/27/24 08:01	SA	EET MID
Soluble	Analysis	300.0		20	50 mL	50 mL	91912	09/27/24 10:49	SMC	EET MID

Client Sample ID: BES 24 - 12
Date Collected: 09/20/24 10:54
Date Received: 09/25/24 16:44

Lab Sample ID: 890-7167-12
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	91902	09/27/24 09:28	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	91815	09/27/24 15:08	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			91989	09/27/24 15:08	SM	EET MID
Total/NA	Analysis	8015 NM		1			92100	09/27/24 15:22	SM	EET MID
Total/NA	Prep	8015NM Prep			10.09 g	10.00 mL	91860	09/26/24 14:15	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	91875	09/27/24 15:22	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	91880	09/27/24 08:01	SA	EET MID
Soluble	Analysis	300.0		20	50 mL	50 mL	91912	09/27/24 11:05	SMC	EET MID

Client Sample ID: BES 24 - 13
Date Collected: 09/20/24 10:59
Date Received: 09/25/24 16:44

Lab Sample ID: 890-7167-13
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	91902	09/27/24 09:28	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	91815	09/27/24 16:31	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			91989	09/27/24 16:31	SM	EET MID
Total/NA	Analysis	8015 NM		1			92100	09/27/24 15:42	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10.00 mL	91860	09/26/24 14:15	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	91875	09/27/24 15:42	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	91880	09/27/24 08:01	SA	EET MID
Soluble	Analysis	300.0		10	50 mL	50 mL	91912	09/27/24 11:11	SMC	EET MID

Client Sample ID: BES 24 - 14
Date Collected: 09/20/24 11:04
Date Received: 09/25/24 16:44

Lab Sample ID: 890-7167-14
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	91902	09/27/24 09:28	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	91815	09/27/24 16:52	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			91989	09/27/24 16:52	SM	EET MID

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Lab Chronicle

Client: Vertex
Project/Site: SPUD 16 10H

Job ID: 890-7167-1
SDG: 23 E - 02857

Client Sample ID: BES 24 - 14 — Lab Sample ID: 890-7167-14
Date Collected: 09/20/24 11:04
Date Received: 09/25/24 16:44
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			92100	09/27/24 17:32	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10.00 mL	91860	09/26/24 14:15	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	91875	09/27/24 17:32	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	91880	09/27/24 08:01	SA	EET MID
Soluble	Analysis	300.0		10	50 mL	50 mL	91912	09/27/24 11:27	SMC	EET MID

Client Sample ID: BES 24 - 15 — Lab Sample ID: 890-7167-15
Date Collected: 09/20/24 11:10
Date Received: 09/25/24 16:44
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	91902	09/27/24 09:28	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	91815	09/27/24 17:12	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			91989	09/27/24 17:12	SM	EET MID
Total/NA	Analysis	8015 NM		1			92100	09/27/24 17:52	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10.00 mL	91860	09/26/24 14:15	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	91875	09/27/24 17:52	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	91880	09/27/24 08:01	SA	EET MID
Soluble	Analysis	300.0		20	50 mL	50 mL	91912	09/27/24 11:32	SMC	EET MID

Client Sample ID: BES 24 - 16 — Lab Sample ID: 890-7167-16
Date Collected: 09/20/24 11:14
Date Received: 09/25/24 16:44
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	91902	09/27/24 09:28	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	91815	09/27/24 17:33	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			91989	09/27/24 17:33	SM	EET MID
Total/NA	Analysis	8015 NM		1			92100	09/27/24 18:12	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10.00 mL	91860	09/26/24 14:15	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	91875	09/27/24 18:12	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	91880	09/27/24 08:01	SA	EET MID
Soluble	Analysis	300.0		20	50 mL	50 mL	91912	09/27/24 11:38	SMC	EET MID

Client Sample ID: BES 24 - 17 — Lab Sample ID: 890-7167-17
Date Collected: 09/20/24 11:19
Date Received: 09/25/24 16:44
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	91902	09/27/24 09:28	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	91815	09/27/24 17:53	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			91989	09/27/24 17:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			92100	09/27/24 18:33	SM	EET MID
Total/NA	Prep	8015NM Prep			10.06 g	10.00 mL	91860	09/26/24 14:15	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	91875	09/27/24 18:33	SM	EET MID

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Lab Chronicle

Client: Vertex
Project/Site: SPUD 16 10H

Job ID: 890-7167-1
SDG: 23 E - 02857

Client Sample ID: BES 24 - 17
Date Collected: 09/20/24 11:19
Date Received: 09/25/24 16:44

Lab Sample ID: 890-7167-17
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.05 g	50 mL	91880	09/27/24 08:01	SA	EET MID
Soluble	Analysis	300.0		20	50 mL	50 mL	91912	09/27/24 11:43	SMC	EET MID

Client Sample ID: BES 24 - 18
Date Collected: 09/20/24 11:24
Date Received: 09/25/24 16:44

Lab Sample ID: 890-7167-18
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	91902	09/27/24 09:28	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	91815	09/27/24 18:14	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			91989	09/27/24 18:14	SM	EET MID
Total/NA	Analysis	8015 NM		1			92100	09/27/24 18:53	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10.00 mL	91860	09/26/24 14:15	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	91875	09/27/24 18:53	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	91880	09/27/24 08:01	SA	EET MID
Soluble	Analysis	300.0		20	50 mL	50 mL	91912	09/27/24 11:48	SMC	EET MID

Client Sample ID: BES 24 - 19
Date Collected: 09/20/24 11:27
Date Received: 09/25/24 16:44

Lab Sample ID: 890-7167-19
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	91902	09/27/24 09:28	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	91815	09/27/24 18:34	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			91989	09/27/24 18:34	SM	EET MID
Total/NA	Analysis	8015 NM		1			92100	09/27/24 19:13	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10.00 mL	91860	09/26/24 14:15	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	91875	09/27/24 19:13	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	91880	09/27/24 08:01	SA	EET MID
Soluble	Analysis	300.0		10	50 mL	50 mL	91912	09/27/24 11:54	SMC	EET MID

Client Sample ID: BES 24 - 20
Date Collected: 09/20/24 11:34
Date Received: 09/25/24 16:44

Lab Sample ID: 890-7167-20
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	91902	09/27/24 09:28	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	91815	09/27/24 18:55	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			91989	09/27/24 18:55	SM	EET MID
Total/NA	Analysis	8015 NM		1			92100	09/27/24 19:34	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10.00 mL	91860	09/26/24 14:15	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	91875	09/27/24 19:34	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	91881	09/27/24 08:03	SA	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	91915	09/27/24 12:18	CH	EET MID

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Lab Chronicle

Client: Vertex
Project/Site: SPUD 16 10H

Job ID: 890-7167-1
SDG: 23 E - 02857

Client Sample ID: WES 24 - 01 — Lab Sample ID: 890-7167-21
Date Collected: 09/20/24 11:40
Date Received: 09/25/24 16:44
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	91911	09/27/24 09:47	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	91882	09/27/24 12:09	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			91989	09/27/24 12:09	SM	EET MID
Total/NA	Analysis	8015 NM		1			92100	09/27/24 10:34	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10.00 mL	91861	09/26/24 14:18	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	91877	09/27/24 10:34	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	91881	09/27/24 08:03	SA	EET MID
Soluble	Analysis	300.0		20	50 mL	50 mL	91915	09/27/24 11:45	CH	EET MID

Client Sample ID: WES 24 - 02 — Lab Sample ID: 890-7167-22
Date Collected: 09/20/24 11:45
Date Received: 09/25/24 16:44
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	91911	09/27/24 09:47	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	91882	09/27/24 12:30	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			91989	09/27/24 12:30	SM	EET MID
Total/NA	Analysis	8015 NM		1			92100	09/27/24 11:36	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10.00 mL	91861	09/26/24 14:18	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	91877	09/27/24 11:36	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	91881	09/27/24 08:03	SA	EET MID
Soluble	Analysis	300.0		20	50 mL	50 mL	91915	09/27/24 11:52	CH	EET MID

Client Sample ID: WES 24 - 03 — Lab Sample ID: 890-7167-23
Date Collected: 09/20/24 11:49
Date Received: 09/25/24 16:44
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	91911	09/27/24 09:47	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	91882	09/27/24 12:50	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			91989	09/27/24 12:50	SM	EET MID
Total/NA	Analysis	8015 NM		1			92100	09/27/24 11:56	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10.00 mL	91861	09/26/24 14:18	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	91877	09/27/24 11:56	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	91881	09/27/24 08:03	SA	EET MID
Soluble	Analysis	300.0		20	50 mL	50 mL	91915	09/27/24 11:58	CH	EET MID

Client Sample ID: WES 24 - 04 — Lab Sample ID: 890-7167-24
Date Collected: 09/20/24 11:59
Date Received: 09/25/24 16:44
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	91911	09/27/24 09:47	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	91882	09/27/24 13:11	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			91989	09/27/24 13:11	SM	EET MID

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Lab Chronicle

Client: Vertex
Project/Site: SPUD 16 10H

Job ID: 890-7167-1
SDG: 23 E - 02857

Client Sample ID: WES 24 - 04 — Lab Sample ID: 890-7167-24
Date Collected: 09/20/24 11:59
Date Received: 09/25/24 16:44
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			92100	09/27/24 12:17	SM	EET MID
Total/NA	Prep	8015NM Prep			10.06 g	10.00 mL	91861	09/26/24 14:18	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	91877	09/27/24 12:17	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	91881	09/27/24 08:03	SA	EET MID
Soluble	Analysis	300.0		20	50 mL	50 mL	91915	09/27/24 12:05	CH	EET MID

Client Sample ID: WES 24 - 05 — Lab Sample ID: 890-7167-25
Date Collected: 09/20/24 11:57
Date Received: 09/25/24 16:44
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	91911	09/27/24 09:47	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	91882	09/27/24 13:31	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			91989	09/27/24 13:31	SM	EET MID
Total/NA	Analysis	8015 NM		1			92100	09/27/24 12:37	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10.00 mL	91861	09/26/24 14:18	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	91877	09/27/24 12:37	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	91881	09/27/24 08:03	SA	EET MID
Soluble	Analysis	300.0		10	50 mL	50 mL	91915	09/27/24 12:37	CH	EET MID

Client Sample ID: WES 24 - 06 — Lab Sample ID: 890-7167-26
Date Collected: 09/20/24 12:10
Date Received: 09/25/24 16:44
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	91911	09/27/24 09:47	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	91882	09/27/24 13:52	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			91989	09/27/24 13:52	SM	EET MID
Total/NA	Analysis	8015 NM		1			92100	09/27/24 12:58	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10.00 mL	91861	09/26/24 14:18	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	91877	09/27/24 12:58	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	91881	09/27/24 08:03	SA	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	91915	09/27/24 12:44	CH	EET MID

Client Sample ID: WES 24 - 07 — Lab Sample ID: 890-7167-27
Date Collected: 09/20/24 12:19
Date Received: 09/25/24 16:44
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	91911	09/27/24 09:47	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	91882	09/27/24 14:12	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			91989	09/27/24 14:12	SM	EET MID
Total/NA	Analysis	8015 NM		1			92100	09/27/24 13:19	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10.00 mL	91861	09/26/24 14:18	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	91877	09/27/24 13:19	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Vertex
Project/Site: SPUD 16 10H

Job ID: 890-7167-1
SDG: 23 E - 02857

Client Sample ID: WES 24 - 07
Date Collected: 09/20/24 12:19
Date Received: 09/25/24 16:44

Lab Sample ID: 890-7167-27
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.95 g	50 mL	91881	09/27/24 08:03	SA	EET MID
Soluble	Analysis	300.0		10	50 mL	50 mL	91915	09/27/24 12:50	CH	EET MID

Client Sample ID: WES 24 - 08
Date Collected: 09/20/24 12:31
Date Received: 09/25/24 16:44

Lab Sample ID: 890-7167-28
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	91911	09/27/24 09:47	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	91882	09/27/24 14:33	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			91989	09/27/24 14:33	SM	EET MID
Total/NA	Analysis	8015 NM		1			92100	09/27/24 13:39	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10.00 mL	91861	09/26/24 14:18	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	91877	09/27/24 13:39	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	91881	09/27/24 08:03	SA	EET MID
Soluble	Analysis	300.0		10	50 mL	50 mL	91915	09/27/24 12:57	CH	EET MID

Client Sample ID: WES 24 - 09
Date Collected: 09/20/24 12:39
Date Received: 09/25/24 16:44

Lab Sample ID: 890-7167-29
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	91911	09/27/24 09:47	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	91882	09/27/24 14:53	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			91989	09/27/24 14:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			92100	09/27/24 14:00	SM	EET MID
Total/NA	Prep	8015NM Prep			10.06 g	10.00 mL	91861	09/26/24 14:18	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	91877	09/27/24 14:00	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	91881	09/27/24 08:03	SA	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	91915	09/27/24 13:03	CH	EET MID

Client Sample ID: WES 24 - 10
Date Collected: 09/20/24 12:48
Date Received: 09/25/24 16:44

Lab Sample ID: 890-7167-30
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	91911	09/27/24 09:47	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	91882	09/27/24 15:14	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			91989	09/27/24 15:14	SM	EET MID
Total/NA	Analysis	8015 NM		1			92100	09/27/24 14:20	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10.00 mL	91861	09/26/24 14:18	EL	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	91877	09/27/24 14:20	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	91881	09/27/24 08:03	SA	EET MID
Soluble	Analysis	300.0		10	50 mL	50 mL	91915	09/27/24 13:10	CH	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Vertex

Project/Site: SPUD 16 10H

Job ID: 890-7167-1

SDG: 23 E - 02857

Laboratory References:

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

Eurofins Carlsbad

9/30/2024

Accreditation/Certification Summary

Client: Vertex

Project/Site: SPUD 16 10H

Job ID: 890-7167-1

SDG: 23 E - 02857

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400	06-30-25

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
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Eurofins Carlsbad

Method Summary

Client: Vertex
Project/Site: SPUD 16 10H

Job ID: 890-7167-1
SDG: 23 E - 02857

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

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Eurofins Carlsbad

9/30/2024

Sample Summary

Client: Vertex
Project/Site: SPUD 16 10H

Job ID: 890-7167-1
SDG: 23 E - 02857

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-7167-1	BES 24 - 01	Solid	09/20/24 10:04	09/25/24 16:44	4.5'
890-7167-2	BES 24 - 02	Solid	09/20/24 10:09	09/25/24 16:44	4.5'
890-7167-3	BES 24 - 03	Solid	09/20/24 10:14	09/25/24 16:44	4.5'
890-7167-4	BES 24 - 04	Solid	09/20/24 10:19	09/25/24 16:44	4.5'
890-7167-5	BES 24 - 05	Solid	09/20/24 10:22	09/25/24 16:44	4.5'
890-7167-6	BES 24 - 06	Solid	09/20/24 10:25	09/25/24 16:44	4.5'
890-7167-7	BES 24 - 07	Solid	09/20/24 10:30	09/25/24 16:44	4.5'
890-7167-8	BES 24 - 08	Solid	09/20/24 10:34	09/25/24 16:44	4.5'
890-7167-9	BES 24 - 09	Solid	09/20/24 10:38	09/25/24 16:44	4.5'
890-7167-10	BES 24 - 10	Solid	09/20/24 10:42	09/25/24 16:44	4.5'
890-7167-11	BES 24 - 11	Solid	09/20/24 10:46	09/25/24 16:44	4.5'
890-7167-12	BES 24 - 12	Solid	09/20/24 10:54	09/25/24 16:44	4.5'
890-7167-13	BES 24 - 13	Solid	09/20/24 10:59	09/25/24 16:44	4.5'
890-7167-14	BES 24 - 14	Solid	09/20/24 11:04	09/25/24 16:44	4.5'
890-7167-15	BES 24 - 15	Solid	09/20/24 11:10	09/25/24 16:44	4.5'
890-7167-16	BES 24 - 16	Solid	09/20/24 11:14	09/25/24 16:44	1'
890-7167-17	BES 24 - 17	Solid	09/20/24 11:19	09/25/24 16:44	1'
890-7167-18	BES 24 - 18	Solid	09/20/24 11:24	09/25/24 16:44	1'
890-7167-19	BES 24 - 19	Solid	09/20/24 11:27	09/25/24 16:44	1'
890-7167-20	BES 24 - 20	Solid	09/20/24 11:34	09/25/24 16:44	1'
890-7167-21	WES 24 - 01	Solid	09/20/24 11:40	09/25/24 16:44	0 - 4.5'
890-7167-22	WES 24 - 02	Solid	09/20/24 11:45	09/25/24 16:44	0 - 4.5'
890-7167-23	WES 24 - 03	Solid	09/20/24 11:49	09/25/24 16:44	0 - 4.5'
890-7167-24	WES 24 - 04	Solid	09/20/24 11:59	09/25/24 16:44	0 - 4.5'
890-7167-25	WES 24 - 05	Solid	09/20/24 11:57	09/25/24 16:44	0 - 4.5'
890-7167-26	WES 24 - 06	Solid	09/20/24 12:10	09/25/24 16:44	0 - 1
890-7167-27	WES 24 - 07	Solid	09/20/24 12:19	09/25/24 16:44	0 - 1
890-7167-28	WES 24 - 08	Solid	09/20/24 12:31	09/25/24 16:44	0 - 1
890-7167-29	WES 24 - 09	Solid	09/20/24 12:39	09/25/24 16:44	0 - 1
890-7167-30	WES 24 - 10	Solid	09/20/24 12:48	09/25/24 16:44	0 - 1

Eurofins Carlsbad
9/30/2024

9/30/2024

Chain of Custody

eurofins

Environment Testing
Xenco

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

Work Order No: **2165742**

www.xenco.com Page **1** of **3**

Project Manager:	Chad Hensley	Bill to: (if different)	Devon Energy
Company Name:	Vertex resource	Company Name:	Devon Energy
Address:	3101 Boyd drive	Address:	
City, State ZIP:		City, State ZIP:	CHensley@vertexresource.com
Phone:	575-361-9634	Email:	RPlogger@vertexresource.com

Work Order Comments

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

Project Name:	SPad 16 10H	**Turn Around**		Pres. Code
Project Number:	23E-02857	☐ Routine	☑ Rush	
Project Location:	Eddy county	Due Date:	48 Hour	
Sampler's Name:	R. Plogger	TAT starts the day received by		
PO #:		the lab, if received by 4:30pm		

ANALYSIS REQUEST

Preservative Codes

None: NO   DI Water: H₂O
Cool: Cool   MeOH: Me
HCL: HC   HNO₃: HN
H₂SO₄: H₂   NaOH: Na
H₃PO₄: HP
NaHSO₄: NABIS
Na₂S₂O₃: NaSO₃
Acetate+NaOH: Zn
OH+Ascorbic Acid: SAPC

SAMPLE RECEIPT

Temp Blank:	(Yes) No	Wet Ice: (Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID: TNMCOT
Cooler Custody Seals:	Yes No (N/A)	Correction Factor: 0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading: 4.4
Total Containers:		Corrected Temperature: 4.2

Parameters: Chloride | BTEX | TPH

890-7167 Chain of Custody

Sample Comments

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	Chloride	BTEX	TPH			
BES24-01	Soil	9.20.24	10:04	4.5'	X	1	X	X	X			
02			10:09									
03			10:14									
04			10:19									
05			10:22									
06			10:25									
07			10:30									
08			10:34									
09			10:38									
10	↓	↓	10:42	↓	↓	↓	↓	↓	↓			

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

R. Plogger   Bruno   9125   1644

9/30/2024

Chain of Custody

eurofins
Environment Testing
Xenco

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

Work Order No: 21165742

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Field	Value
Project Manager:	C. Hensley
Company Name:	vertex
Address:	
City, State ZIP:	
Phone:	575-361-9634

Field	Value
Bill to: (if different)	Devon
Company Name:	
Address:	
City, State ZIP:	
Email:	

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐

State of Project:

Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level I ☐

Deliverables: EDD ☐ ADaPT ☐ Other:

Field	Value
Project Name:	STad 1610 H
Project Number:	23E-02857
Project Location:	Eddy County
Sampler's Name:	R. Plogger
PO #:	

Turn Around
☐ Routine ☑ Rush
Due Date: 48 Hr
TAT starts the day received by the lab, if received by 4:30pm

SAMPLE RECEIPT

Temp Blank:	Yes (No)
Samples Received Intact:	(Yes) No
Cooler Custody Seals:	Yes No (N/A)
Sample Custody Seals:	Yes No (N/A)
Total Containers:	

Wet Ice:	(Yes) No
Thermometer ID:	Tnmcc
Correction Factor:	-0.2
Temperature Reading:	4.4
Corrected Temperature:	4.2

Preservative Codes

None: NO	DI Water: H2O
Cool: Cool	MeOH: Me
HCL: HC	HNO3: HN
H2SO4: H2	NaOH: Na
H3PO4: HP	
NaHSO4: NABIS	
Na2S2O3: NaSO3	
Zn Acetate+NaOH: Zn	
NaOH+Ascorbic Acid: SAPC	

ANALYSIS REQUEST

Parameters: Chloride, BTEX, TPH

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	Chloride	BTEX	TPH			Sample Comments
Bes 24 - 11	Soil	9.20.24	10:46	4.5	X	1	X	X	X			
12			10:54	4.5								
13			10:59	4.5								
14			11:04	4.5								
15			11:10	4.5								
16			11:14	1'								
17			11:19	1'								
18			11:24	1'								
19			11:27	1'								
20			11:34	1'								

Total 200.7 / 6010   200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn

Circle Method(s) and Metal(s) to be analyzed   **TCLP / SPLP 6010:** 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U   Hg: 1631 / 245.1 / 7470 / 7471

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

Brun8 9125 1644

9/30/2024

Chain of Custody

eurofins

Environment Testing
Xenco

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

Work Order No: **21165742**

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Project Manager:	C. Hensley
Company Name:	Vertex
Address:	
City, State ZIP:	
Phone:	575-361-9639

Bill to: (if different)	Devon
Company Name:	
Address:	
City, State ZIP:	
Email:	

Work Order Comments

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

Project Name:	SPud 16 10H
Project Number:	23E-02857
Project Location:	Eddy county
Sampler's Name:	R. Progoc
PO #:	

Turn Around
☐ Routine ☑ Rush
Due Date: **48 Hrs**
TAT starts the day received by the lab, if received by 4:30pm

Preservative Codes

None: NO	DI Water: H₂O
Cool: Cool	MeOH: Me
HCL: HC	HNO₃: HN
H₂SO₄: H₂	NaOH: Na
H₃PO₄: HP	
NaHSO₄: NABIS	
Na₂S₂O₃: NaSO₃	
Zn Acetate+NaOH: Zn	
NaOH+Ascorbic Acid: SAPC	

SAMPLE RECEIPT

Temp Blank:	Yes No (Yes)	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID:	WMX
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	4.4
Total Containers:		Corrected Temperature:	4.2

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Combo	# of Cont	Parameters	Chloride	BTEX	TPH	Sample Comments
WES24-01	Soil	9.20.24	11:40	0-4.5	X	1		X	X	X	
02			11:45	0-4.5							
03			11:49	0-4.5							
04			11:59	0-4.5							
05			11:57	0-4.5							
06			12:10	0-1							
07			12:19	0-1							
08			12:31	0-1							
09			12:39	0-1							
10			12:48	0-1							

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

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

Brun8 9/25 1644

Login Sample Receipt Checklist

Client: Vertex

Job Number: 890-7167-1
SDG Number: 23 E - 02857

Login Number: 7167
List Number: 1
Creator: Bruns, Shannon

List Source: Eurofins Carlsbad

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

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Login Sample Receipt Checklist

Client: Vertex

Job Number: 890-7167-1
SDG Number: 23 E - 02857

Login Number: 7167
List Number: 2
Creator: Laing, Edmundo

List Source: Eurofins Midland
List Creation: 09/26/24 08:54 PM

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

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11

ANALYTICAL REPORT

PREPARED FOR

Attn: Chad Hensley
Vertex
3101 Boyd Dr
Carlsbad, New Mexico 88220

Generated 7/26/2024 10:34:34 AM

JOB DESCRIPTION

Spud 16 10H

JOB NUMBER

885-7515-1

Eurofins Albuquerque
4901 Hawkins NE
Albuquerque NM 87109

See page two for job notes and contact information.

Released to Imaging: 2/13/2026 1:31:29 PM

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

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7/26/2024 10:34:34 AM

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

Client: Vertex　　　　　　　　　　　　　　　　　　　　　　　　Laboratory Job ID: 885-7515-1
Project/Site: Spud 16 10H

Table of Contents

Definitions/Glossary

Client: Vertex

Job ID: 885-7515-1

Project/Site: Spud 16 10H

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
D	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D.
S1-	Surrogate recovery exceeds control limits, low biased.

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

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Case Narrative

Client: Vertex

Project: Spud 16 10H

Job ID: 885-7515-1

Job ID: 885-7515-1   **Eurofins Albuquerque**

Job Narrative
885-7515-1

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 7/9/2024 7:50 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.8°C.

Gasoline Range Organics

Method 8015D_GRO: Surrogate recovery for the following sample is outside the upper control limit: BH23-41@3' (885-7515-36). Possible double injection from surrogate well.

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

GC VOA

Method 8021B: Surrogate recovery for the following sample is outside the upper control limit: BH23-41@3' (885-7515-36). Possible double injection from surrogate well.

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

Diesel Range Organics

Method 8015D_DRO: The following samples were diluted due to the nature of the sample matrix: BH23-25@1' (885-7515-1) and BH23-32@3' (885-7515-7). Elevated reporting limits (RLs) are provided.

Method 8015D_DRO: The following samples required a dilution due to the nature of the sample matrix: BH23-25@3' (885-7515-2) and BH23-32@4' (885-7515-8). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

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.

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Client Sample Results

Client: Vertex
Project/Site: Spud 16 10H

Job ID: 885-7515-1

Client Sample ID: BH23-25@1'
Date Collected: 07/02/24 10:37
Date Received: 07/09/24 07:50

Lab Sample ID: 885-7515-1
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		4.9	mg/Kg		07/09/24 13:36	07/10/24 17:49	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		35 - 166			07/09/24 13:36	07/10/24 17:49	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024	mg/Kg		07/09/24 13:36	07/10/24 17:49	1
Ethylbenzene	ND		0.049	mg/Kg		07/09/24 13:36	07/10/24 17:49	1
Toluene	ND		0.049	mg/Kg		07/09/24 13:36	07/10/24 17:49	1
Xylenes, Total	ND		0.098	mg/Kg		07/09/24 13:36	07/10/24 17:49	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		48 - 145			07/09/24 13:36	07/10/24 17:49	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]	**110**		9.9	mg/Kg		07/10/24 09:15	07/11/24 11:02	1
Motor Oil Range Organics [C28-C40]	**420**		50	mg/Kg		07/10/24 09:15	07/11/24 11:02	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	95		62 - 134			07/10/24 09:15	07/11/24 11:02	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**870**		60	mg/Kg		07/11/24 10:42	07/11/24 15:45	20

Eurofins Albuquerque

Client Sample Results

Client: Vertex   Job ID: 885-7515-1
Project/Site: Spud 16 10H

Client Sample ID: BH23-25@3'   **Lab Sample ID: 885-7515-2**
Date Collected: 07/02/24 10:41   **Matrix: Solid**
Date Received: 07/09/24 07:50

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		07/09/24 13:36	07/10/24 18:12	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*136*		*35 - 166*			*07/09/24 13:36*	*07/10/24 18:12*	*1*

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.023	mg/Kg		07/09/24 13:36	07/10/24 18:12	1
Ethylbenzene	ND		0.046	mg/Kg		07/09/24 13:36	07/10/24 18:12	1
Toluene	ND		0.046	mg/Kg		07/09/24 13:36	07/10/24 18:12	1
Xylenes, Total	ND		0.093	mg/Kg		07/09/24 13:36	07/10/24 18:12	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*94*		*48 - 145*			*07/09/24 13:36*	*07/10/24 18:12*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**1100**		98	mg/Kg		07/10/24 09:15	07/11/24 11:43	10
Motor Oil Range Organics [C28-C40]	**2400**		490	mg/Kg		07/10/24 09:15	07/11/24 11:43	10

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	*0*	S1- D	*62 - 134*			*07/10/24 09:15*	*07/11/24 11:43*	*10*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2600**		150	mg/Kg		07/11/24 10:42	07/12/24 14:14	50

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Client Sample Results

Client: Vertex

Project/Site: Spud 16 10H

Job ID: 885-7515-1

Client Sample ID: BH23-25@4'

Date Collected: 07/02/24 10:47

Date Received: 07/09/24 07:50

Lab Sample ID: 885-7515-3

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		07/09/24 13:36	07/10/24 19:00	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*99*		*35 - 166*			*07/09/24 13:36*	*07/10/24 19:00*	*1*

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		07/09/24 13:36	07/10/24 19:00	1
Ethylbenzene	ND		0.049	mg/Kg		07/09/24 13:36	07/10/24 19:00	1
Toluene	ND		0.049	mg/Kg		07/09/24 13:36	07/10/24 19:00	1
Xylenes, Total	ND		0.099	mg/Kg		07/09/24 13:36	07/10/24 19:00	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*90*		*48 - 145*			*07/09/24 13:36*	*07/10/24 19:00*	*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		07/10/24 09:15	07/11/24 12:24	1
Motor Oil Range Organics [C28-C40]	ND		47	mg/Kg		07/10/24 09:15	07/11/24 12:24	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	*102*		*62 - 134*			*07/10/24 09:15*	*07/11/24 12:24*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4700**		150	mg/Kg		07/11/24 10:42	07/12/24 14:27	50

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Client Sample Results

Client: Vertex
Project/Site: Spud 16 10H

Job ID: 885-7515-1

Client Sample ID: BH23-25@5'
Date Collected: 07/02/24 12:59
Date Received: 07/09/24 07:50

Lab Sample ID: 885-7515-4
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		4.7	mg/Kg		07/09/24 13:36	07/10/24 19:23	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*97*		*35 - 166*			*07/09/24 13:36*	*07/10/24 19:23*	*1*

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.023	mg/Kg		07/09/24 13:36	07/10/24 19:23	1
Ethylbenzene	ND		0.047	mg/Kg		07/09/24 13:36	07/10/24 19:23	1
Toluene	ND		0.047	mg/Kg		07/09/24 13:36	07/10/24 19:23	1
Xylenes, Total	ND		0.093	mg/Kg		07/09/24 13:36	07/10/24 19:23	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*89*		*48 - 145*			*07/09/24 13:36*	*07/10/24 19:23*	*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**		8.8	mg/Kg		07/10/24 09:15	07/11/24 12:35	1
Motor Oil Range Organics [C28-C40]	ND		44	mg/Kg		07/10/24 09:15	07/11/24 12:35	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	*98*		*62 - 134*			*07/10/24 09:15*	*07/11/24 12:35*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4800**		150	mg/Kg		07/11/24 10:42	07/12/24 14:40	50

Eurofins Albuquerque

Client Sample Results

Client: Vertex

Job ID: 885-7515-1

Project/Site: Spud 16 10H

Client Sample ID: BH23-25@6'

Lab Sample ID: 885-7515-5

Date Collected: 07/02/24 13:09

Matrix: Solid

Date Received: 07/09/24 07:50

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		07/09/24 13:36	07/10/24 19:47	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*97*		*35 - 166*			*07/09/24 13:36*	*07/10/24 19:47*	*1*

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		07/09/24 13:36	07/10/24 19:47	1
Ethylbenzene	ND		0.050	mg/Kg		07/09/24 13:36	07/10/24 19:47	1
Toluene	ND		0.050	mg/Kg		07/09/24 13:36	07/10/24 19:47	1
Xylenes, Total	ND		0.10	mg/Kg		07/09/24 13:36	07/10/24 19:47	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*89*		*48 - 145*			*07/09/24 13:36*	*07/10/24 19:47*	*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		9.5	mg/Kg		07/10/24 09:15	07/10/24 18:46	1
Motor Oil Range Organics [C28-C40]	ND		48	mg/Kg		07/10/24 09:15	07/10/24 18:46	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	*97*		*62 - 134*			*07/10/24 09:15*	*07/10/24 18:46*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**7100**		300	mg/Kg		07/11/24 10:42	07/12/24 15:18	100

Eurofins Albuquerque

Client Sample Results

Client: Vertex
Project/Site: Spud 16 10H

Job ID: 885-7515-1

Client Sample ID: BH23-32@1'
Date Collected: 07/02/24 10:54
Date Received: 07/09/24 07:50

Lab Sample ID: 885-7515-6
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		07/09/24 13:36	07/10/24 20:10	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		35 - 166			07/09/24 13:36	07/10/24 20:10	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		07/09/24 13:36	07/10/24 20:10	1
Ethylbenzene	ND		0.049	mg/Kg		07/09/24 13:36	07/10/24 20:10	1
Toluene	ND		0.049	mg/Kg		07/09/24 13:36	07/10/24 20:10	1
Xylenes, Total	ND		0.098	mg/Kg		07/09/24 13:36	07/10/24 20:10	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		48 - 145			07/09/24 13:36	07/10/24 20:10	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		9.8	mg/Kg		07/10/24 09:15	07/10/24 18:57	1
Motor Oil Range Organics [C28-C40]	ND		49	mg/Kg		07/10/24 09:15	07/10/24 18:57	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	103		62 - 134			07/10/24 09:15	07/10/24 18:57	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1300		60	mg/Kg		07/11/24 10:42	07/11/24 17:15	20

Eurofins Albuquerque

Client Sample Results

Client: Vertex
Project/Site: Spud 16 10H

Job ID: 885-7515-1

Client Sample ID: BH23-32@3'
Date Collected: 07/02/24 10:57
Date Received: 07/09/24 07:50

Lab Sample ID: 885-7515-7
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		07/09/24 13:36	07/10/24 20:34	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		35 - 166			07/09/24 13:36	07/10/24 20:34	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024	mg/Kg		07/09/24 13:36	07/10/24 20:34	1
Ethylbenzene	ND		0.048	mg/Kg		07/09/24 13:36	07/10/24 20:34	1
Toluene	ND		0.048	mg/Kg		07/09/24 13:36	07/10/24 20:34	1
Xylenes, Total	ND		0.095	mg/Kg		07/09/24 13:36	07/10/24 20:34	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		48 - 145			07/09/24 13:36	07/10/24 20:34	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]	**830**		97	mg/Kg		07/10/24 09:15	07/10/24 19:09	10
Motor Oil Range Organics [C28-C40]	**2600**		480	mg/Kg		07/10/24 09:15	07/10/24 19:09	10

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	0	S1- D	62 - 134			07/10/24 09:15	07/10/24 19:09	10

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2400**		150	mg/Kg		07/11/24 10:42	07/12/24 15:31	50

Eurofins Albuquerque

Client Sample Results

Client: Vertex
Project/Site: Spud 16 10H

Job ID: 885-7515-1

Client Sample ID: BH23-32@4'
Date Collected: 07/02/24 11:03
Date Received: 07/09/24 07:50

Lab Sample ID: 885-7515-8
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		4.8	mg/Kg		07/09/24 13:36	07/10/24 20:57	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*104*		*35 - 166*			*07/09/24 13:36*	*07/10/24 20:57*	*1*

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024	mg/Kg		07/09/24 13:36	07/10/24 20:57	1
Ethylbenzene	ND		0.048	mg/Kg		07/09/24 13:36	07/10/24 20:57	1
Toluene	ND		0.048	mg/Kg		07/09/24 13:36	07/10/24 20:57	1
Xylenes, Total	ND		0.097	mg/Kg		07/09/24 13:36	07/10/24 20:57	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*89*		*48 - 145*			*07/09/24 13:36*	*07/10/24 20:57*	*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]	**1000**		96	mg/Kg		07/10/24 09:15	07/11/24 12:46	10
Motor Oil Range Organics [C28-C40]	**2900**		480	mg/Kg		07/10/24 09:15	07/11/24 12:46	10

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	*0*	S1- D	*62 - 134*			*07/10/24 09:15*	*07/11/24 12:46*	*10*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2900**		150	mg/Kg		07/11/24 10:42	07/12/24 15:44	50

Eurofins Albuquerque

Client Sample Results

Client: Vertex　　　　　　　　　　　　　　　　　　　　　　　　　　　　　Job ID: 885-7515-1
Project/Site: Spud 16 10H

Client Sample ID: BH23-33@1'　　　　　　　　　　　　　　　**Lab Sample ID: 885-7515-9**
Date Collected: 07/02/24 11:07　　　　　　　　　　　　　　　　　　　**Matrix: Solid**
Date Received: 07/09/24 07:50

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		07/09/24 13:36	07/10/24 21:21	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		35 - 166			07/09/24 13:36	07/10/24 21:21	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024	mg/Kg		07/09/24 13:36	07/10/24 21:21	1
Ethylbenzene	ND		0.047	mg/Kg		07/09/24 13:36	07/10/24 21:21	1
Toluene	ND		0.047	mg/Kg		07/09/24 13:36	07/10/24 21:21	1
Xylenes, Total	ND		0.095	mg/Kg		07/09/24 13:36	07/10/24 21:21	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		48 - 145			07/09/24 13:36	07/10/24 21:21	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		9.6	mg/Kg		07/10/24 09:15	07/11/24 13:27	1
Motor Oil Range Organics [C28-C40]	ND		48	mg/Kg		07/10/24 09:15	07/11/24 13:27	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	90		62 - 134			07/10/24 09:15	07/11/24 13:27	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1600**		60	mg/Kg		07/11/24 10:42	07/11/24 17:54	20

Eurofins Albuquerque

Client Sample Results

Client: Vertex

Project/Site: Spud 16 10H

Job ID: 885-7515-1

Client Sample ID: BH23-33@3'

Date Collected: 07/02/24 11:11

Date Received: 07/09/24 07:50

Lab Sample ID: 885-7515-10

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		07/09/24 13:36	07/10/24 22:07	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		35 - 166			07/09/24 13:36	07/10/24 22:07	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024	mg/Kg		07/09/24 13:36	07/10/24 22:07	1
Ethylbenzene	ND		0.048	mg/Kg		07/09/24 13:36	07/10/24 22:07	1
Toluene	ND		0.048	mg/Kg		07/09/24 13:36	07/10/24 22:07	1
Xylenes, Total	ND		0.096	mg/Kg		07/09/24 13:36	07/10/24 22:07	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		48 - 145			07/09/24 13:36	07/10/24 22:07	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		07/10/24 09:15	07/10/24 19:42	1
Motor Oil Range Organics [C28-C40]	ND		49	mg/Kg		07/10/24 09:15	07/10/24 19:42	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	89		62 - 134			07/10/24 09:15	07/10/24 19:42	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**6400**		300	mg/Kg		07/11/24 10:42	07/12/24 15:57	100

Eurofins Albuquerque

7/26/2024

Client Sample Results

Client: Vertex

Project/Site: Spud 16 10H

Job ID: 885-7515-1

Client Sample ID: BH23-33@4'

Date Collected: 07/02/24 11:15

Date Received: 07/09/24 07:50

Lab Sample ID: 885-7515-11

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		4.6	mg/Kg		07/09/24 13:36	07/10/24 22:31	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		35 - 166			07/09/24 13:36	07/10/24 22:31	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.023	mg/Kg		07/09/24 13:36	07/10/24 22:31	1
Ethylbenzene	ND		0.046	mg/Kg		07/09/24 13:36	07/10/24 22:31	1
Toluene	ND		0.046	mg/Kg		07/09/24 13:36	07/10/24 22:31	1
Xylenes, Total	ND		0.092	mg/Kg		07/09/24 13:36	07/10/24 22:31	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		48 - 145			07/09/24 13:36	07/10/24 22:31	1

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.7	mg/Kg		07/10/24 09:15	07/10/24 19:53	1
Motor Oil Range Organics [C28-C40]	ND		49	mg/Kg		07/10/24 09:15	07/10/24 19:53	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	89		62 - 134			07/10/24 09:15	07/10/24 19:53	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4800**		150	mg/Kg		07/11/24 10:42	07/12/24 16:10	50

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Client Sample Results

Client: Vertex
Project/Site: Spud 16 10H

Job ID: 885-7515-1

Client Sample ID: BH23-34@1'
Date Collected: 07/02/24 11:19
Date Received: 07/09/24 07:50

Lab Sample ID: 885-7515-12
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		07/09/24 13:36	07/10/24 22:54	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*94*		*35 - 166*			*07/09/24 13:36*	*07/10/24 22:54*	*1*

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		07/09/24 13:36	07/10/24 22:54	1
Ethylbenzene	ND		0.049	mg/Kg		07/09/24 13:36	07/10/24 22:54	1
Toluene	ND		0.049	mg/Kg		07/09/24 13:36	07/10/24 22:54	1
Xylenes, Total	ND		0.099	mg/Kg		07/09/24 13:36	07/10/24 22:54	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*88*		*48 - 145*			*07/09/24 13:36*	*07/10/24 22:54*	*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		9.3	mg/Kg		07/10/24 09:15	07/10/24 20:05	1
Motor Oil Range Organics [C28-C40]	ND		46	mg/Kg		07/10/24 09:15	07/10/24 20:05	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	*89*		*62 - 134*			*07/10/24 09:15*	*07/10/24 20:05*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2200**		150	mg/Kg		07/11/24 10:50	07/12/24 16:23	50

Eurofins Albuquerque

Client Sample Results

Client: Vertex

Project/Site: Spud 16 10H

Job ID: 885-7515-1

Client Sample ID: BH23-34@3'

Date Collected: 07/02/24 11:23

Date Received: 07/09/24 07:50

Lab Sample ID: 885-7515-13

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		4.8	mg/Kg		07/09/24 13:36	07/10/24 23:41	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*92*		*35 - 166*			*07/09/24 13:36*	*07/10/24 23:41*	*1*

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024	mg/Kg		07/09/24 13:36	07/10/24 23:41	1
Ethylbenzene	ND		0.048	mg/Kg		07/09/24 13:36	07/10/24 23:41	1
Toluene	ND		0.048	mg/Kg		07/09/24 13:36	07/10/24 23:41	1
Xylenes, Total	ND		0.095	mg/Kg		07/09/24 13:36	07/10/24 23:41	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*86*		*48 - 145*			*07/09/24 13:36*	*07/10/24 23:41*	*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		07/10/24 09:15	07/10/24 20:16	1
Motor Oil Range Organics [C28-C40]	ND		50	mg/Kg		07/10/24 09:15	07/10/24 20:16	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	*91*		*62 - 134*			*07/10/24 09:15*	*07/10/24 20:16*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2500**		150	mg/Kg		07/11/24 11:55	07/12/24 16:36	50

Eurofins Albuquerque

Client Sample Results

Client: Vertex
Project/Site: Spud 16 10H

Job ID: 885-7515-1

Client Sample ID: BH23-34@4'
Date Collected: 07/02/24 11:27
Date Received: 07/09/24 07:50

Lab Sample ID: 885-7515-14
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		4.8	mg/Kg		07/09/24 13:36	07/11/24 00:04	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*92*		*35 - 166*			*07/09/24 13:36*	*07/11/24 00:04*	*1*

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024	mg/Kg		07/09/24 13:36	07/11/24 00:04	1
Ethylbenzene	ND		0.048	mg/Kg		07/09/24 13:36	07/11/24 00:04	1
Toluene	ND		0.048	mg/Kg		07/09/24 13:36	07/11/24 00:04	1
Xylenes, Total	ND		0.096	mg/Kg		07/09/24 13:36	07/11/24 00:04	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*86*		*48 - 145*			*07/09/24 13:36*	*07/11/24 00:04*	*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		9.8	mg/Kg		07/10/24 09:15	07/10/24 20:27	1
Motor Oil Range Organics [C28-C40]	ND		49	mg/Kg		07/10/24 09:15	07/10/24 20:27	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	*92*		*62 - 134*			*07/10/24 09:15*	*07/10/24 20:27*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4900**		300	mg/Kg		07/11/24 11:55	07/12/24 16:48	100

Eurofins Albuquerque

Client Sample Results

Client: Vertex
Project/Site: Spud 16 10H

Job ID: 885-7515-1

Client Sample ID: BH23-35@1'
Date Collected: 07/02/24 11:30
Date Received: 07/09/24 07:50

Lab Sample ID: 885-7515-15
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		4.8	mg/Kg		07/09/24 15:34	07/10/24 22:59	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*99*		*35 - 166*			*07/09/24 15:34*	*07/10/24 22:59*	*1*

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024	mg/Kg		07/09/24 15:34	07/10/24 22:59	1
Ethylbenzene	ND		0.048	mg/Kg		07/09/24 15:34	07/10/24 22:59	1
Toluene	ND		0.048	mg/Kg		07/09/24 15:34	07/10/24 22:59	1
Xylenes, Total	ND		0.096	mg/Kg		07/09/24 15:34	07/10/24 22:59	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*90*		*48 - 145*			*07/09/24 15:34*	*07/10/24 22:59*	*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		9.9	mg/Kg		07/10/24 11:23	07/10/24 21:34	1
Motor Oil Range Organics [C28-C40]	ND		50	mg/Kg		07/10/24 11:23	07/10/24 21:34	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	*88*		*62 - 134*			*07/10/24 11:23*	*07/10/24 21:34*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2500**		150	mg/Kg		07/11/24 11:55	07/12/24 17:01	50

Eurofins Albuquerque

Client Sample Results

Client: Vertex
Job ID: 885-7515-1
Project/Site: Spud 16 10H

Client Sample ID: BH23-35@3'   **Lab Sample ID: 885-7515-16**
Date Collected: 07/02/24 11:33   **Matrix: Solid**
Date Received: 07/09/24 07:50

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		07/09/24 15:34	07/11/24 00:05	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		35 - 166			07/09/24 15:34	07/11/24 00:05	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		07/09/24 15:34	07/11/24 00:05	1
Ethylbenzene	ND		0.050	mg/Kg		07/09/24 15:34	07/11/24 00:05	1
Toluene	ND		0.050	mg/Kg		07/09/24 15:34	07/11/24 00:05	1
Xylenes, Total	ND		0.099	mg/Kg		07/09/24 15:34	07/11/24 00:05	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		48 - 145			07/09/24 15:34	07/11/24 00:05	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		9.8	mg/Kg		07/10/24 11:23	07/10/24 21:45	1
Motor Oil Range Organics [C28-C40]	ND		49	mg/Kg		07/10/24 11:23	07/10/24 21:45	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	90		62 - 134			07/10/24 11:23	07/10/24 21:45	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**5000**		300	mg/Kg		07/11/24 11:55	07/12/24 17:14	100

Eurofins Albuquerque

Client Sample Results

Client: Vertex
Project/Site: Spud 16 10H

Job ID: 885-7515-1

Client Sample ID: BH23-35@4'
Date Collected: 07/02/24 11:37
Date Received: 07/09/24 07:50

Lab Sample ID: 885-7515-17
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		4.8	mg/Kg		07/09/24 15:34	07/11/24 01:10	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		35 - 166			07/09/24 15:34	07/11/24 01:10	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024	mg/Kg		07/09/24 15:34	07/11/24 01:10	1
Ethylbenzene	ND		0.048	mg/Kg		07/09/24 15:34	07/11/24 01:10	1
Toluene	ND		0.048	mg/Kg		07/09/24 15:34	07/11/24 01:10	1
Xylenes, Total	ND		0.097	mg/Kg		07/09/24 15:34	07/11/24 01:10	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		48 - 145			07/09/24 15:34	07/11/24 01:10	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		07/10/24 11:23	07/10/24 21:56	1
Motor Oil Range Organics [C28-C40]	ND		49	mg/Kg		07/10/24 11:23	07/10/24 21:56	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	89		62 - 134			07/10/24 11:23	07/10/24 21:56	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**8700**		300	mg/Kg		07/11/24 11:55	07/12/24 17:53	100

Eurofins Albuquerque

Client Sample Results

Client: Vertex
Project/Site: Spud 16 10H

Job ID: 885-7515-1

Client Sample ID: BH23-36@1'
Date Collected: 07/02/24 11:42
Date Received: 07/09/24 07:50

Lab Sample ID: 885-7515-18
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		4.7	mg/Kg		07/09/24 15:34	07/11/24 01:32	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*101*		*35 - 166*			*07/09/24 15:34*	*07/11/24 01:32*	*1*

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024	mg/Kg		07/09/24 15:34	07/11/24 01:32	1
Ethylbenzene	ND		0.047	mg/Kg		07/09/24 15:34	07/11/24 01:32	1
Toluene	ND		0.047	mg/Kg		07/09/24 15:34	07/11/24 01:32	1
Xylenes, Total	ND		0.095	mg/Kg		07/09/24 15:34	07/11/24 01:32	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*89*		*48 - 145*			*07/09/24 15:34*	*07/11/24 01:32*	*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		07/10/24 11:23	07/10/24 22:07	1
Motor Oil Range Organics [C28-C40]	ND		47	mg/Kg		07/10/24 11:23	07/10/24 22:07	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	*92*		*62 - 134*			*07/10/24 11:23*	*07/10/24 22:07*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1700**		60	mg/Kg		07/11/24 11:55	07/11/24 20:41	20

Eurofins Albuquerque

Client Sample Results

Client: Vertex

Project/Site: Spud 16 10H

Job ID: 885-7515-1

Client Sample ID: BH23-36@3'

Date Collected: 07/02/24 11:45

Date Received: 07/09/24 07:50

Lab Sample ID: 885-7515-19

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		4.9	mg/Kg		07/09/24 15:34	07/11/24 01:53	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*98*		*35 - 166*			*07/09/24 15:34*	*07/11/24 01:53*	*1*

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		07/09/24 15:34	07/11/24 01:53	1
Ethylbenzene	ND		0.049	mg/Kg		07/09/24 15:34	07/11/24 01:53	1
Toluene	ND		0.049	mg/Kg		07/09/24 15:34	07/11/24 01:53	1
Xylenes, Total	ND		0.099	mg/Kg		07/09/24 15:34	07/11/24 01:53	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*90*		*48 - 145*			*07/09/24 15:34*	*07/11/24 01:53*	*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		9.9	mg/Kg		07/10/24 11:23	07/10/24 22:18	1
Motor Oil Range Organics [C28-C40]	ND		50	mg/Kg		07/10/24 11:23	07/10/24 22:18	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	*91*		*62 - 134*			*07/10/24 11:23*	*07/10/24 22:18*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3300**		150	mg/Kg		07/11/24 11:55	07/12/24 18:06	50

Eurofins Albuquerque

Client Sample Results

Client: Vertex
Project/Site: Spud 16 10H

Job ID: 885-7515-1

Client Sample ID: BH23-36@4'
Date Collected: 07/02/24 11:48
Date Received: 07/09/24 07:50

Lab Sample ID: 885-7515-20
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		4.6	mg/Kg		07/09/24 15:34	07/11/24 02:15	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*95*		*35 - 166*			*07/09/24 15:34*	*07/11/24 02:15*	*1*

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.023	mg/Kg		07/09/24 15:34	07/11/24 02:15	1
Ethylbenzene	ND		0.046	mg/Kg		07/09/24 15:34	07/11/24 02:15	1
Toluene	ND		0.046	mg/Kg		07/09/24 15:34	07/11/24 02:15	1
Xylenes, Total	ND		0.093	mg/Kg		07/09/24 15:34	07/11/24 02:15	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*92*		*48 - 145*			*07/09/24 15:34*	*07/11/24 02:15*	*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		10	mg/Kg		07/10/24 11:23	07/10/24 22:29	1
Motor Oil Range Organics [C28-C40]	ND		50	mg/Kg		07/10/24 11:23	07/10/24 22:29	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	*97*		*62 - 134*			*07/10/24 11:23*	*07/10/24 22:29*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3100**		150	mg/Kg		07/11/24 11:55	07/12/24 18:19	50

Eurofins Albuquerque

Client Sample Results

Client: Vertex   Job ID: 885-7515-1
Project/Site: Spud 16 10H

Client Sample ID: BH23-37@1'   **Lab Sample ID: 885-7515-21**
Date Collected: 07/02/24 11:52   **Matrix: Solid**
Date Received: 07/09/24 07:50

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		07/09/24 15:34	07/11/24 02:37	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		35 - 166			07/09/24 15:34	07/11/24 02:37	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.023	mg/Kg		07/09/24 15:34	07/11/24 02:37	1
Ethylbenzene	ND		0.046	mg/Kg		07/09/24 15:34	07/11/24 02:37	1
Toluene	ND		0.046	mg/Kg		07/09/24 15:34	07/11/24 02:37	1
Xylenes, Total	ND		0.092	mg/Kg		07/09/24 15:34	07/11/24 02:37	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		48 - 145			07/09/24 15:34	07/11/24 02:37	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]	**18**		9.0	mg/Kg		07/10/24 11:23	07/10/24 22:41	1
Motor Oil Range Organics [C28-C40]	**46**		45	mg/Kg		07/10/24 11:23	07/10/24 22:41	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	89		62 - 134			07/10/24 11:23	07/10/24 22:41	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1100**		60	mg/Kg		07/11/24 11:55	07/11/24 21:20	20

Eurofins Albuquerque

Client Sample Results

Client: Vertex

Project/Site: Spud 16 10H

Job ID: 885-7515-1

Client Sample ID: BH23-37@3'

Lab Sample ID: 885-7515-22

Date Collected: 07/02/24 11:54

Matrix: Solid

Date Received: 07/09/24 07:50

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		07/09/24 15:34	07/11/24 02:59	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*96*		*35 - 166*			*07/09/24 15:34*	*07/11/24 02:59*	*1*

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		07/09/24 15:34	07/11/24 02:59	1
Ethylbenzene	ND		0.049	mg/Kg		07/09/24 15:34	07/11/24 02:59	1
Toluene	ND		0.049	mg/Kg		07/09/24 15:34	07/11/24 02:59	1
Xylenes, Total	ND		0.098	mg/Kg		07/09/24 15:34	07/11/24 02:59	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*89*		*48 - 145*			*07/09/24 15:34*	*07/11/24 02:59*	*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		9.9	mg/Kg		07/10/24 11:23	07/10/24 22:52	1
Motor Oil Range Organics [C28-C40]	ND		50	mg/Kg		07/10/24 11:23	07/10/24 22:52	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	*85*		*62 - 134*			*07/10/24 11:23*	*07/10/24 22:52*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3900**		150	mg/Kg		07/11/24 11:55	07/12/24 18:31	50

Eurofins Albuquerque

Client Sample Results

Client: Vertex

Project/Site: Spud 16 10H

Job ID: 885-7515-1

Client Sample ID: BH23-37@4'

Date Collected: 07/02/24 11:58

Date Received: 07/09/24 07:50

Lab Sample ID: 885-7515-23

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		07/09/24 15:34	07/11/24 03:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*			*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	99		*35 - 166*			*07/09/24 15:34*	*07/11/24 03:20*	*1*

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024	mg/Kg		07/09/24 15:34	07/11/24 03:20	1
Ethylbenzene	ND		0.048	mg/Kg		07/09/24 15:34	07/11/24 03:20	1
Toluene	ND		0.048	mg/Kg		07/09/24 15:34	07/11/24 03:20	1
Xylenes, Total	ND		0.097	mg/Kg		07/09/24 15:34	07/11/24 03:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*			*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	93		*48 - 145*			*07/09/24 15:34*	*07/11/24 03:20*	*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		07/10/24 11:23	07/10/24 23:14	1
Motor Oil Range Organics [C28-C40]	ND		49	mg/Kg		07/10/24 11:23	07/10/24 23:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*			*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	86		*62 - 134*			*07/10/24 11:23*	*07/10/24 23:14*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3400**		150	mg/Kg		07/11/24 11:55	07/12/24 18:44	50

Eurofins Albuquerque

Client Sample Results

Client: Vertex
Project/Site: Spud 16 10H

Job ID: 885-7515-1

Client Sample ID: BH23-38@1'
Date Collected: 07/02/24 12:04
Date Received: 07/09/24 07:50

Lab Sample ID: 885-7515-24
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		07/09/24 15:34	07/11/24 03:42	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		35 - 166			07/09/24 15:34	07/11/24 03:42	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024	mg/Kg		07/09/24 15:34	07/11/24 03:42	1
Ethylbenzene	ND		0.049	mg/Kg		07/09/24 15:34	07/11/24 03:42	1
Toluene	ND		0.049	mg/Kg		07/09/24 15:34	07/11/24 03:42	1
Xylenes, Total	ND		0.098	mg/Kg		07/09/24 15:34	07/11/24 03:42	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		48 - 145			07/09/24 15:34	07/11/24 03:42	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**		9.5	mg/Kg		07/10/24 11:23	07/10/24 23:26	1
Motor Oil Range Organics [C28-C40]	ND		48	mg/Kg		07/10/24 11:23	07/10/24 23:26	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	86		62 - 134			07/10/24 11:23	07/10/24 23:26	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**5100**		150	mg/Kg		07/11/24 11:55	07/12/24 18:57	50

Eurofins Albuquerque

Client Sample Results

Client: Vertex

Job ID: 885-7515-1

Project/Site: Spud 16 10H

Client Sample ID: BH23-38@3'

Lab Sample ID: 885-7515-25

Date Collected: 07/02/24 12:09

Matrix: Solid

Date Received: 07/09/24 07:50

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		07/09/24 15:34	07/11/24 04:26	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		35 - 166			07/09/24 15:34	07/11/24 04:26	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024	mg/Kg		07/09/24 15:34	07/11/24 04:26	1
Ethylbenzene	ND		0.047	mg/Kg		07/09/24 15:34	07/11/24 04:26	1
Toluene	ND		0.047	mg/Kg		07/09/24 15:34	07/11/24 04:26	1
Xylenes, Total	ND		0.095	mg/Kg		07/09/24 15:34	07/11/24 04:26	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		48 - 145			07/09/24 15:34	07/11/24 04:26	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		07/10/24 11:23	07/10/24 23:37	1
Motor Oil Range Organics [C28-C40]	ND		46	mg/Kg		07/10/24 11:23	07/10/24 23:37	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	89		62 - 134			07/10/24 11:23	07/10/24 23:37	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3100**		150	mg/Kg		07/11/24 11:55	07/12/24 19:10	50

Eurofins Albuquerque

Client Sample Results

Client: Vertex

Project/Site: Spud 16 10H

Job ID: 885-7515-1

Client Sample ID: BH23-38@4'

Date Collected: 07/02/24 12:13

Date Received: 07/09/24 07:50

Lab Sample ID: 885-7515-26

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		07/09/24 15:34	07/11/24 04:48	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*97*		*35 - 166*			*07/09/24 15:34*	*07/11/24 04:48*	*1*

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024	mg/Kg		07/09/24 15:34	07/11/24 04:48	1
Ethylbenzene	ND		0.049	mg/Kg		07/09/24 15:34	07/11/24 04:48	1
Toluene	ND		0.049	mg/Kg		07/09/24 15:34	07/11/24 04:48	1
Xylenes, Total	ND		0.098	mg/Kg		07/09/24 15:34	07/11/24 04:48	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*93*		*48 - 145*			*07/09/24 15:34*	*07/11/24 04:48*	*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]	ND		9.4	mg/Kg		07/10/24 11:23	07/10/24 23:48	1
Motor Oil Range Organics [C28-C40]	ND		47	mg/Kg		07/10/24 11:23	07/10/24 23:48	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	*84*		*62 - 134*			*07/10/24 11:23*	*07/10/24 23:48*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**5500**		300	mg/Kg		07/11/24 11:55	07/12/24 19:23	100

Eurofins Albuquerque

Client Sample Results

Client: Vertex
Project/Site: Spud 16 10H

Job ID: 885-7515-1

Client Sample ID: BH23-39@1'
Date Collected: 07/02/24 12:17
Date Received: 07/09/24 07:50

Lab Sample ID: 885-7515-27
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		07/09/24 15:34	07/11/24 05:09	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*95*		*35 - 166*			*07/09/24 15:34*	*07/11/24 05:09*	*1*

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024	mg/Kg		07/09/24 15:34	07/11/24 05:09	1
Ethylbenzene	ND		0.047	mg/Kg		07/09/24 15:34	07/11/24 05:09	1
Toluene	ND		0.047	mg/Kg		07/09/24 15:34	07/11/24 05:09	1
Xylenes, Total	ND		0.094	mg/Kg		07/09/24 15:34	07/11/24 05:09	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*91*		*48 - 145*			*07/09/24 15:34*	*07/11/24 05:09*	*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		07/10/24 11:23	07/10/24 23:59	1
Motor Oil Range Organics [C28-C40]	ND		48	mg/Kg		07/10/24 11:23	07/10/24 23:59	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	*88*		*62 - 134*			*07/10/24 11:23*	*07/10/24 23:59*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2300**		150	mg/Kg		07/11/24 11:55	07/12/24 19:36	50

Eurofins Albuquerque

Client Sample Results

Client: Vertex

Project/Site: Spud 16 10H

Job ID: 885-7515-1

Client Sample ID: BH23-39@3'

Date Collected: 07/02/24 12:21

Date Received: 07/09/24 07:50

Lab Sample ID: 885-7515-28

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		24	mg/Kg		07/09/24 15:34	07/11/24 05:31	5

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		35 - 166			07/09/24 15:34	07/11/24 05:31	5

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024	mg/Kg		07/09/24 15:34	07/11/24 05:31	1
Ethylbenzene	ND		0.047	mg/Kg		07/09/24 15:34	07/11/24 05:31	1
Toluene	ND		0.047	mg/Kg		07/09/24 15:34	07/11/24 05:31	1
Xylenes, Total	ND		0.095	mg/Kg		07/09/24 15:34	07/11/24 05:31	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		48 - 145			07/09/24 15:34	07/11/24 05:31	1

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.7	mg/Kg		07/10/24 11:23	07/11/24 00:11	1
Motor Oil Range Organics [C28-C40]	ND		49	mg/Kg		07/10/24 11:23	07/11/24 00:11	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	88		62 - 134			07/10/24 11:23	07/11/24 00:11	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**29000**		1500	mg/Kg		07/11/24 11:55	07/12/24 19:49	500

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Client Sample Results

Client: Vertex
Project/Site: Spud 16 10H

Job ID: 885-7515-1

Client Sample ID: BH23-39@4'
Date Collected: 07/02/24 13:04
Date Received: 07/09/24 07:50

Lab Sample ID: 885-7515-29
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	15		12	mg/Kg		07/09/24 15:34	07/11/24 05:53	5

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	156		35 - 166			07/09/24 15:34	07/11/24 05:53	5

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.12	mg/Kg		07/09/24 15:34	07/11/24 05:53	5
Ethylbenzene	0.62		0.24	mg/Kg		07/09/24 15:34	07/11/24 05:53	5
Toluene	ND		0.24	mg/Kg		07/09/24 15:34	07/11/24 05:53	5
Xylenes, Total	ND		0.49	mg/Kg		07/09/24 15:34	07/11/24 05:53	5

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		48 - 145			07/09/24 15:34	07/11/24 05:53	5

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	1100		19	mg/Kg		07/10/24 11:23	07/11/24 13:38	2
Motor Oil Range Organics [C28-C40]	560		95	mg/Kg		07/10/24 11:23	07/11/24 13:38	2

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	101		62 - 134			07/10/24 11:23	07/11/24 13:38	2

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8400		300	mg/Kg		07/11/24 11:55	07/12/24 20:27	100

Eurofins Albuquerque

Client Sample Results

Client: Vertex

Project/Site: Spud 16 10H

Job ID: 885-7515-1

Client Sample ID: BH23-39@6'

Date Collected: 07/02/24 12:22

Date Received: 07/09/24 07:50

Lab Sample ID: 885-7515-30

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		07/09/24 15:34	07/11/24 06:15	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		35 - 166			07/09/24 15:34	07/11/24 06:15	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024	mg/Kg		07/09/24 15:34	07/11/24 06:15	1
Ethylbenzene	ND		0.048	mg/Kg		07/09/24 15:34	07/11/24 06:15	1
Toluene	ND		0.048	mg/Kg		07/09/24 15:34	07/11/24 06:15	1
Xylenes, Total	ND		0.096	mg/Kg		07/09/24 15:34	07/11/24 06:15	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		48 - 145			07/09/24 15:34	07/11/24 06:15	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		9.5	mg/Kg		07/10/24 11:23	07/11/24 00:34	1
Motor Oil Range Organics [C28-C40]	ND		48	mg/Kg		07/10/24 11:23	07/11/24 00:34	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	88		62 - 134			07/10/24 11:23	07/11/24 00:34	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**31000**		1500	mg/Kg		07/11/24 11:55	07/12/24 20:40	500

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7/26/2024

Client Sample Results

Client: Vertex   Job ID: 885-7515-1
Project/Site: Spud 16 10H

Client Sample ID: BH23-40@1'   **Lab Sample ID: 885-7515-31**
Date Collected: 07/02/24 12:25   **Matrix: Solid**
Date Received: 07/09/24 07:50

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		07/09/24 15:34	07/11/24 06:37	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*97*		*35 - 166*			*07/09/24 15:34*	*07/11/24 06:37*	*1*

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024	mg/Kg		07/09/24 15:34	07/11/24 06:37	1
Ethylbenzene	ND		0.047	mg/Kg		07/09/24 15:34	07/11/24 06:37	1
Toluene	ND		0.047	mg/Kg		07/09/24 15:34	07/11/24 06:37	1
Xylenes, Total	ND		0.094	mg/Kg		07/09/24 15:34	07/11/24 06:37	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*91*		*48 - 145*			*07/09/24 15:34*	*07/11/24 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		9.8	mg/Kg		07/10/24 11:23	07/11/24 00:45	1
Motor Oil Range Organics [C28-C40]	ND		49	mg/Kg		07/10/24 11:23	07/11/24 00:45	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	*90*		*62 - 134*			*07/10/24 11:23*	*07/11/24 00:45*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**6400**		300	mg/Kg		07/11/24 11:55	07/12/24 20:53	100

Eurofins Albuquerque

Client Sample Results

Client: Vertex
Project/Site: Spud 16 10H

Job ID: 885-7515-1

Client Sample ID: BH23-40@3'
Date Collected: 07/02/24 12:30
Date Received: 07/09/24 07:50

Lab Sample ID: 885-7515-32
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		07/09/24 15:34	07/11/24 06:59	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		35 - 166			07/09/24 15:34	07/11/24 06:59	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024	mg/Kg		07/09/24 15:34	07/11/24 06:59	1
Ethylbenzene	ND		0.047	mg/Kg		07/09/24 15:34	07/11/24 06:59	1
Toluene	ND		0.047	mg/Kg		07/09/24 15:34	07/11/24 06:59	1
Xylenes, Total	ND		0.095	mg/Kg		07/09/24 15:34	07/11/24 06:59	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		48 - 145			07/09/24 15:34	07/11/24 06:59	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		9.2	mg/Kg		07/10/24 11:23	07/11/24 00:57	1
Motor Oil Range Organics [C28-C40]	ND		46	mg/Kg		07/10/24 11:23	07/11/24 00:57	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	90		62 - 134			07/10/24 11:23	07/11/24 00:57	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**28000**		1500	mg/Kg		07/11/24 11:55	07/12/24 21:06	500

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Client Sample Results

Client: Vertex
Project/Site: Spud 16 10H

Job ID: 885-7515-1

Client Sample ID: BH23-40@4'
Date Collected: 07/02/24 12:34
Date Received: 07/09/24 07:50

Lab Sample ID: 885-7515-33
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		07/09/24 15:34	07/11/24 07:20	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*96*		*35 - 166*			*07/09/24 15:34*	*07/11/24 07:20*	*1*

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024	mg/Kg		07/09/24 15:34	07/11/24 07:20	1
Ethylbenzene	ND		0.049	mg/Kg		07/09/24 15:34	07/11/24 07:20	1
Toluene	ND		0.049	mg/Kg		07/09/24 15:34	07/11/24 07:20	1
Xylenes, Total	ND		0.098	mg/Kg		07/09/24 15:34	07/11/24 07:20	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*93*		*48 - 145*			*07/09/24 15:34*	*07/11/24 07:20*	*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		07/10/24 11:23	07/11/24 01:08	1
Motor Oil Range Organics [C28-C40]	ND		48	mg/Kg		07/10/24 11:23	07/11/24 01:08	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	*88*		*62 - 134*			*07/10/24 11:23*	*07/11/24 01:08*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**5900**		300	mg/Kg		07/12/24 07:01	07/16/24 16:35	100

Eurofins Albuquerque

Client Sample Results

Client: Vertex

Project/Site: Spud 16 10H

Job ID: 885-7515-1

Client Sample ID: BH23-40@6'

Date Collected: 07/02/24 12:38

Date Received: 07/09/24 07:50

Lab Sample ID: 885-7515-34

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		07/09/24 15:34	07/11/24 07:42	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*94*		*35 - 166*			*07/09/24 15:34*	*07/11/24 07:42*	*1*

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.023	mg/Kg		07/09/24 15:34	07/11/24 07:42	1
Ethylbenzene	ND		0.047	mg/Kg		07/09/24 15:34	07/11/24 07:42	1
Toluene	ND		0.047	mg/Kg		07/09/24 15:34	07/11/24 07:42	1
Xylenes, Total	ND		0.094	mg/Kg		07/09/24 15:34	07/11/24 07:42	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*93*		*48 - 145*			*07/09/24 15:34*	*07/11/24 07:42*	*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		07/10/24 11:23	07/11/24 01:19	1
Motor Oil Range Organics [C28-C40]	ND		49	mg/Kg		07/10/24 11:23	07/11/24 01:19	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	*89*		*62 - 134*			*07/10/24 11:23*	*07/11/24 01:19*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**15000**		600	mg/Kg		07/12/24 07:01	07/16/24 16:50	200

Eurofins Albuquerque

Client Sample Results

Client: Vertex
Project/Site: Spud 16 10H

Job ID: 885-7515-1

Client Sample ID: BH23-41@1'
Date Collected: 07/02/24 12:39
Date Received: 07/09/24 07:50

Lab Sample ID: 885-7515-35
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		07/09/24 16:29	07/11/24 01:38	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*93*		*35 - 166*			*07/09/24 16:29*	*07/11/24 01:38*	*1*

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		07/09/24 16:29	07/11/24 01:38	1
Ethylbenzene	ND		0.049	mg/Kg		07/09/24 16:29	07/11/24 01:38	1
Toluene	ND		0.049	mg/Kg		07/09/24 16:29	07/11/24 01:38	1
Xylenes, Total	ND		0.099	mg/Kg		07/09/24 16:29	07/11/24 01:38	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*87*		*48 - 145*			*07/09/24 16:29*	*07/11/24 01:38*	*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		9.3	mg/Kg		07/11/24 14:22	07/11/24 16:33	1
Motor Oil Range Organics [C28-C40]	ND		47	mg/Kg		07/11/24 14:22	07/11/24 16:33	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	*89*		*62 - 134*			*07/11/24 14:22*	*07/11/24 16:33*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1500**		60	mg/Kg		07/12/24 07:01	07/12/24 08:40	20

Eurofins Albuquerque

Client Sample Results

Client: Vertex
Project/Site: Spud 16 10H

Job ID: 885-7515-1

Client Sample ID: BH23-41@3'
Date Collected: 07/02/24 12:43
Date Received: 07/09/24 07:50

Lab Sample ID: 885-7515-36
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		07/09/24 16:29	07/11/24 02:48	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*201*	*S1+*	*35 - 166*			*07/09/24 16:29*	*07/11/24 02:48*	*1*

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		07/09/24 16:29	07/11/24 02:48	1
Ethylbenzene	ND		0.050	mg/Kg		07/09/24 16:29	07/11/24 02:48	1
Toluene	ND		0.050	mg/Kg		07/09/24 16:29	07/11/24 02:48	1
Xylenes, Total	ND		0.10	mg/Kg		07/09/24 16:29	07/11/24 02:48	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*195*	*S1+*	*48 - 145*			*07/09/24 16:29*	*07/11/24 02:48*	*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]	ND		9.7	mg/Kg		07/11/24 14:22	07/11/24 16:44	1
Motor Oil Range Organics [C28-C40]	ND		48	mg/Kg		07/11/24 14:22	07/11/24 16:44	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	*86*		*62 - 134*			*07/11/24 14:22*	*07/11/24 16:44*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2700**		150	mg/Kg		07/12/24 07:01	07/16/24 17:05	50

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Client Sample Results

Client: Vertex
Project/Site: Spud 16 10H

Job ID: 885-7515-1

Client Sample ID: BH23-41@4'
Date Collected: 07/02/24 12:47
Date Received: 07/09/24 07:50

Lab Sample ID: 885-7515-37
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		07/09/24 16:29	07/11/24 03:58	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*95*		*35 - 166*			*07/09/24 16:29*	*07/11/24 03:58*	*1*

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		07/09/24 16:29	07/11/24 03:58	1
Ethylbenzene	ND		0.050	mg/Kg		07/09/24 16:29	07/11/24 03:58	1
Toluene	ND		0.050	mg/Kg		07/09/24 16:29	07/11/24 03:58	1
Xylenes, Total	ND		0.099	mg/Kg		07/09/24 16:29	07/11/24 03:58	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*90*		*48 - 145*			*07/09/24 16:29*	*07/11/24 03:58*	*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		07/11/24 14:22	07/11/24 16:55	1
Motor Oil Range Organics [C28-C40]	ND		50	mg/Kg		07/11/24 14:22	07/11/24 16:55	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	*91*		*62 - 134*			*07/11/24 14:22*	*07/11/24 16:55*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3800**		150	mg/Kg		07/12/24 07:01	07/16/24 17:21	50

Eurofins Albuquerque

Client Sample Results

Client: Vertex

Project/Site: Spud 16 10H

Job ID: 885-7515-1

Client Sample ID: BH23-41@6'

Date Collected: 07/02/24 12:52

Date Received: 07/09/24 07:50

Lab Sample ID: 885-7515-38

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		07/09/24 16:29	07/11/24 04:22	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*95*		*35 - 166*			*07/09/24 16:29*	*07/11/24 04:22*	*1*

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		07/09/24 16:29	07/11/24 04:22	1
Ethylbenzene	ND		0.050	mg/Kg		07/09/24 16:29	07/11/24 04:22	1
Toluene	ND		0.050	mg/Kg		07/09/24 16:29	07/11/24 04:22	1
Xylenes, Total	ND		0.099	mg/Kg		07/09/24 16:29	07/11/24 04:22	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*89*		*48 - 145*			*07/09/24 16:29*	*07/11/24 04:22*	*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		07/11/24 14:22	07/11/24 17:06	1
Motor Oil Range Organics [C28-C40]	ND		48	mg/Kg		07/11/24 14:22	07/11/24 17:06	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	*88*		*62 - 134*			*07/11/24 14:22*	*07/11/24 17:06*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**14000**		600	mg/Kg		07/12/24 07:01	07/16/24 18:06	200

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QC Sample Results

Client: Vertex

Project/Site: Spud 16 10H

Job ID: 885-7515-1

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

Lab Sample ID: MB 885-8091/1-A　　　　**Client Sample ID: Method Blank**
Matrix: Solid　　　　**Prep Type: Total/NA**
Analysis Batch: 8221　　　　**Prep Batch: 8091**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		5.0	mg/Kg		07/09/24 13:36	07/10/24 13:30	1

Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		35 - 166			07/09/24 13:36	07/10/24 13:30	1

Lab Sample ID: LCS 885-8091/2-A　　　　**Client Sample ID: Lab Control Sample**
Matrix: Solid　　　　**Prep Type: Total/NA**
Analysis Batch: 8221　　　　**Prep Batch: 8091**

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)	198	S1+	35 - 166

Lab Sample ID: MB 885-8103/1-A　　　　**Client Sample ID: Method Blank**
Matrix: Solid　　　　**Prep Type: Total/NA**
Analysis Batch: 8269　　　　**Prep Batch: 8103**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		5.0	mg/Kg		07/09/24 15:34	07/10/24 22:38	1

Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		35 - 166			07/09/24 15:34	07/10/24 22:38	1

Lab Sample ID: LCS 885-8103/2-A　　　　**Client Sample ID: Lab Control Sample**
Matrix: Solid　　　　**Prep Type: Total/NA**
Analysis Batch: 8269　　　　**Prep Batch: 8103**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			25.0	22.2		mg/Kg		89	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	200	S1+	35 - 166

Lab Sample ID: 885-7515-15 MS　　　　**Client Sample ID: BH23-35@1'**
Matrix: Solid　　　　**Prep Type: Total/NA**
Analysis Batch: 8269　　　　**Prep Batch: 8103**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	ND		24.1	23.0		mg/Kg		95	70 - 130

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QC Sample Results

Client: Vertex   Job ID: 885-7515-1
Project/Site: Spud 16 10H

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

Lab Sample ID: 885-7515-15 MS   **Client Sample ID: BH23-35@1'**
Matrix: Solid   **Prep Type: Total/NA**
Analysis Batch: 8269   **Prep Batch: 8103**

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	214	S1+	35 - 166

Lab Sample ID: 885-7515-15 MSD   **Client Sample ID: BH23-35@1'**
Matrix: Solid   **Prep Type: Total/NA**
Analysis Batch: 8269   **Prep Batch: 8103**

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		24.0	22.2		mg/Kg		93	70 - 130	3	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	213	S1+	35 - 166

Lab Sample ID: MB 885-8110/1-A   **Client Sample ID: Method Blank**
Matrix: Solid   **Prep Type: Total/NA**
Analysis Batch: 8221   **Prep Batch: 8110**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		5.0	mg/Kg		07/09/24 16:29	07/11/24 01:15	1

Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		35 - 166			07/09/24 16:29	07/11/24 01:15	1

Lab Sample ID: LCS 885-8110/2-A   **Client Sample ID: Lab Control Sample**
Matrix: Solid   **Prep Type: Total/NA**
Analysis Batch: 8221   **Prep Batch: 8110**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
Gasoline Range Organics (GRO)-C6-C10			25.0	22.3		mg/Kg		89	70 - 130	

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	196	S1+	35 - 166

Lab Sample ID: 885-7515-35 MS   **Client Sample ID: BH23-41@1'**
Matrix: Solid   **Prep Type: Total/NA**
Analysis Batch: 8221   **Prep Batch: 8110**

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	21.9		mg/Kg		89	70 - 130	

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	198	S1+	35 - 166

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QC Sample Results

Client: Vertex

Project/Site: Spud 16 10H

Job ID: 885-7515-1

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

Lab Sample ID: 885-7515-35 MSD

Matrix: Solid

Analysis Batch: 8221

Client Sample ID: BH23-41@1'

Prep Type: Total/NA

Prep Batch: 8110

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		24.6	21.9		mg/Kg		89	70 - 130	0	20

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

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 885-8091/1-A

Matrix: Solid

Analysis Batch: 8222

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 8091

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		07/09/24 13:36	07/10/24 13:30	1
Ethylbenzene	ND		0.050	mg/Kg		07/09/24 13:36	07/10/24 13:30	1
Toluene	ND		0.050	mg/Kg		07/09/24 13:36	07/10/24 13:30	1
Xylenes, Total	ND		0.10	mg/Kg		07/09/24 13:36	07/10/24 13:30	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	85		48 - 145	07/09/24 13:36	07/10/24 13:30	1

Lab Sample ID: LCS 885-8091/3-A

Matrix: Solid

Analysis Batch: 8222

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 8091

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	1.00	0.912		mg/Kg		91	70 - 130
Ethylbenzene	1.00	0.866		mg/Kg		87	70 - 130
m-Xylene & p-Xylene	2.00	1.75		mg/Kg		87	70 - 130
o-Xylene	1.00	0.841		mg/Kg		84	70 - 130
Toluene	1.00	0.865		mg/Kg		86	70 - 130

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

Lab Sample ID: MB 885-8103/1-A

Matrix: Solid

Analysis Batch: 8270

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 8103

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		07/09/24 15:34	07/10/24 22:38	1
Ethylbenzene	ND		0.050	mg/Kg		07/09/24 15:34	07/10/24 22:38	1
Toluene	ND		0.050	mg/Kg		07/09/24 15:34	07/10/24 22:38	1
Xylenes, Total	ND		0.10	mg/Kg		07/09/24 15:34	07/10/24 22:38	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		48 - 145	07/09/24 15:34	07/10/24 22:38	1

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QC Sample Results

Client: Vertex   Job ID: 885-7515-1
Project/Site: Spud 16 10H

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

Lab Sample ID: LCS 885-8103/3-A   **Client Sample ID: Lab Control Sample**
Matrix: Solid   **Prep Type: Total/NA**
Analysis Batch: 8270   **Prep Batch: 8103**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			1.00	0.967		mg/Kg		97	70 - 130		
Ethylbenzene			1.00	0.965		mg/Kg		96	70 - 130		
m-Xylene & p-Xylene			2.00	1.92		mg/Kg		96	70 - 130		
o-Xylene			1.00	0.960		mg/Kg		96	70 - 130		
Toluene			1.00	0.965		mg/Kg		97	70 - 130		

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

Lab Sample ID: 885-7515-16 MS   **Client Sample ID: BH23-35@3'**
Matrix: Solid   **Prep Type: Total/NA**
Analysis Batch: 8270   **Prep Batch: 8103**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	ND		0.994	0.946		mg/Kg		95	70 - 130		
Ethylbenzene	ND		0.994	0.957		mg/Kg		96	70 - 130		
m-Xylene & p-Xylene	ND		1.99	1.92		mg/Kg		96	70 - 130		
o-Xylene	ND		0.994	0.955		mg/Kg		96	70 - 130		
Toluene	ND		0.994	0.952		mg/Kg		96	70 - 130		

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

Lab Sample ID: 885-7515-16 MSD   **Client Sample ID: BH23-35@3'**
Matrix: Solid   **Prep Type: Total/NA**
Analysis Batch: 8270   **Prep Batch: 8103**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	ND		0.984	0.939		mg/Kg		95	70 - 130	1	20
Ethylbenzene	ND		0.984	0.966		mg/Kg		98	70 - 130	1	20
m-Xylene & p-Xylene	ND		1.97	1.94		mg/Kg		99	70 - 130	1	20
o-Xylene	ND		0.984	0.983		mg/Kg		100	70 - 130	3	20
Toluene	ND		0.984	0.950		mg/Kg		96	70 - 130	0	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	95		48 - 145

Lab Sample ID: MB 885-8110/1-A   **Client Sample ID: Method Blank**
Matrix: Solid   **Prep Type: Total/NA**
Analysis Batch: 8222   **Prep Batch: 8110**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		07/09/24 16:29	07/11/24 01:15	1
Ethylbenzene	ND		0.050	mg/Kg		07/09/24 16:29	07/11/24 01:15	1
Toluene	ND		0.050	mg/Kg		07/09/24 16:29	07/11/24 01:15	1
Xylenes, Total	ND		0.10	mg/Kg		07/09/24 16:29	07/11/24 01:15	1

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QC Sample Results

Client: Vertex

Project/Site: Spud 16 10H

Job ID: 885-7515-1

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

Lab Sample ID: MB 885-8110/1-A
Matrix: Solid
Analysis Batch: 8222

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 8110

Surrogate	MB %Recovery	MB Qualifier	Limits		Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		48 - 145		07/09/24 16:29	07/11/24 01:15	1

Lab Sample ID: LCS 885-8110/3-A
Matrix: Solid
Analysis Batch: 8222

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 8110

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	1.00	0.836		mg/Kg		84	70 - 130
Ethylbenzene	1.00	0.796		mg/Kg		80	70 - 130
m-Xylene & p-Xylene	2.00	1.61		mg/Kg		81	70 - 130
o-Xylene	1.00	0.794		mg/Kg		79	70 - 130
Toluene	1.00	0.789		mg/Kg		79	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	88		48 - 145

Lab Sample ID: 885-7515-36 MS
Matrix: Solid
Analysis Batch: 8222

Client Sample ID: BH23-41@3'
Prep Type: Total/NA
Prep Batch: 8110

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	ND		0.997	0.850		mg/Kg		85	70 - 130
Ethylbenzene	ND		0.997	0.809		mg/Kg		81	70 - 130
m-Xylene & p-Xylene	ND		1.99	1.65		mg/Kg		83	70 - 130
o-Xylene	ND		0.997	0.798		mg/Kg		80	70 - 130
Toluene	ND		0.997	0.814		mg/Kg		82	70 - 130

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

Lab Sample ID: 885-7515-36 MSD
Matrix: Solid
Analysis Batch: 8222

Client Sample ID: BH23-41@3'
Prep Type: Total/NA
Prep Batch: 8110

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	ND		0.996	0.907		mg/Kg		91	70 - 130	6	20
Ethylbenzene	ND		0.996	0.870		mg/Kg		87	70 - 130	7	20
m-Xylene & p-Xylene	ND		1.99	1.75		mg/Kg		88	70 - 130	6	20
o-Xylene	ND		0.996	0.848		mg/Kg		85	70 - 130	6	20
Toluene	ND		0.996	0.866		mg/Kg		87	70 - 130	6	20

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

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QC Sample Results

Client: Vertex

Project/Site: Spud 16 10H

Job ID: 885-7515-1

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

Lab Sample ID: MB 885-8147/1-A   **Client Sample ID: Method Blank**
Matrix: Solid   **Prep Type: Total/NA**
Analysis Batch: 8141   **Prep Batch: 8147**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10	mg/Kg		07/10/24 09:15	07/10/24 16:22	1
Motor Oil Range Organics [C28-C40]	ND		50	mg/Kg		07/10/24 09:15	07/10/24 16:22	1

Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	95		62 - 134			07/10/24 09:15	07/10/24 16:22	1

Lab Sample ID: LCS 885-8147/2-A   **Client Sample ID: Lab Control Sample**
Matrix: Solid   **Prep Type: Total/NA**
Analysis Batch: 8141   **Prep Batch: 8147**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Diesel Range Organics [C10-C28]	50.0	48.6		mg/Kg		97	60 - 135

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Di-n-octyl phthalate (Surr)	91		62 - 134

Lab Sample ID: 885-7515-14 MS   **Client Sample ID: BH23-34@4'**
Matrix: Solid   **Prep Type: Total/NA**
Analysis Batch: 8141   **Prep Batch: 8147**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Diesel Range Organics [C10-C28]	ND		47.9	45.7		mg/Kg		95	44 - 136

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

Lab Sample ID: 885-7515-14 MSD   **Client Sample ID: BH23-34@4'**
Matrix: Solid   **Prep Type: Total/NA**
Analysis Batch: 8141   **Prep Batch: 8147**

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	47.2		mg/Kg		97	44 - 136	3	32

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Di-n-octyl phthalate (Surr)	95		62 - 134

Lab Sample ID: MB 885-8166/1-A   **Client Sample ID: Method Blank**
Matrix: Solid   **Prep Type: Total/NA**
Analysis Batch: 8141   **Prep Batch: 8166**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10	mg/Kg		07/10/24 11:23	07/10/24 21:11	1
Motor Oil Range Organics [C28-C40]	ND		50	mg/Kg		07/10/24 11:23	07/10/24 21:11	1

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QC Sample Results

Client: Vertex
Job ID: 885-7515-1
Project/Site: Spud 16 10H

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

Lab Sample ID: MB 885-8166/1-A
Client Sample ID: Method Blank
Matrix: Solid
Prep Type: Total/NA
Analysis Batch: 8141
Prep Batch: 8166

Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	85		62 - 134			07/10/24 11:23	07/10/24 21:11	1

Lab Sample ID: LCS 885-8166/2-A
Client Sample ID: Lab Control Sample
Matrix: Solid
Prep Type: Total/NA
Analysis Batch: 8141
Prep Batch: 8166

Analyte		Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics [C10-C28]		50.0	45.3		mg/Kg		91	60 - 135		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Di-n-octyl phthalate (Surr)	86		62 - 134

Lab Sample ID: 885-7515-34 MS
Client Sample ID: BH23-40@6'
Matrix: Solid
Prep Type: Total/NA
Analysis Batch: 8141
Prep Batch: 8166

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics [C10-C28]	ND		46.5	43.0		mg/Kg		93	44 - 136		

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

Lab Sample ID: 885-7515-34 MSD
Client Sample ID: BH23-40@6'
Matrix: Solid
Prep Type: Total/NA
Analysis Batch: 8141
Prep Batch: 8166

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		48.2	45.7		mg/Kg		95	44 - 136	6	32

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Di-n-octyl phthalate (Surr)	93		62 - 134

Lab Sample ID: MB 885-8261/1-A
Client Sample ID: Method Blank
Matrix: Solid
Prep Type: Total/NA
Analysis Batch: 8225
Prep Batch: 8261

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10	mg/Kg		07/11/24 14:22	07/11/24 16:11	1
Motor Oil Range Organics [C28-C40]	ND		50	mg/Kg		07/11/24 14:22	07/11/24 16:11	1

Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	88		62 - 134			07/11/24 14:22	07/11/24 16:11	1

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QC Sample Results

Client: Vertex

Job ID: 885-7515-1

Project/Site: Spud 16 10H

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

Lab Sample ID: LCS 885-8261/2-A

Client Sample ID: Lab Control Sample

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 8225

Prep Batch: 8261

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics [C10-C28]			50.0	45.1		mg/Kg		90	60 - 135		

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

Lab Sample ID: 885-7515-38 MS

Client Sample ID: BH23-41@6'

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 8225

Prep Batch: 8261

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics [C10-C28]	ND		49.8	45.1		mg/Kg		91	44 - 136		

Surrogate	MS %Recovery	MS Qualifier	Limits
Di-n-octyl phthalate (Surr)	91		62 - 134

Lab Sample ID: 885-7515-38 MSD

Client Sample ID: BH23-41@6'

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 8225

Prep Batch: 8261

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		47.4	41.3		mg/Kg		87	44 - 136	9	32

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Di-n-octyl phthalate (Surr)	88		62 - 134

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 885-8233/2-A

Client Sample ID: Method Blank

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 8273

Prep Batch: 8233

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	mg/Kg		07/11/24 10:42	07/11/24 12:06	1

Lab Sample ID: LCS 885-8233/3-A

Client Sample ID: Lab Control Sample

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 8273

Prep Batch: 8233

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			30.0	31.2		mg/Kg		104	90 - 110		

Eurofins Albuquerque

QC Sample Results

Client: Vertex

Project/Site: Spud 16 10H

Job ID: 885-7515-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MRL 885-8233/1-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 8273 **Prep Batch: 8233**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	3.00	3.30		mg/L		110	50 - 150		

Lab Sample ID: MB 885-8240/1-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 8273 **Prep Batch: 8240**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	mg/Kg		07/11/24 11:55	07/11/24 18:45	1

Lab Sample ID: LCS 885-8240/2-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 8273 **Prep Batch: 8240**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	30.0	31.3		mg/Kg		104	90 - 110		

Lab Sample ID: MB 885-8293/2-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 8374 **Prep Batch: 8293**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	mg/Kg		07/12/24 07:01	07/12/24 07:44	1

Lab Sample ID: LCS 885-8293/3-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 8374 **Prep Batch: 8293**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	30.0	31.1		mg/Kg		104	90 - 110		

Eurofins Albuquerque

QC Association Summary

Client: Vertex

Job ID: 885-7515-1

Project/Site: Spud 16 10H

GC VOA

Prep Batch: 8091

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7515-1	BH23-25@1'	Total/NA	Solid	5030C	
885-7515-2	BH23-25@3'	Total/NA	Solid	5030C	
885-7515-3	BH23-25@4'	Total/NA	Solid	5030C	
885-7515-4	BH23-25@5'	Total/NA	Solid	5030C	
885-7515-5	BH23-25@6'	Total/NA	Solid	5030C	
885-7515-6	BH23-32@1'	Total/NA	Solid	5030C	
885-7515-7	BH23-32@3'	Total/NA	Solid	5030C	
885-7515-8	BH23-32@4'	Total/NA	Solid	5030C	
885-7515-9	BH23-33@1'	Total/NA	Solid	5030C	
885-7515-10	BH23-33@3'	Total/NA	Solid	5030C	
885-7515-11	BH23-33@4'	Total/NA	Solid	5030C	
885-7515-12	BH23-34@1'	Total/NA	Solid	5030C	
885-7515-13	BH23-34@3'	Total/NA	Solid	5030C	
885-7515-14	BH23-34@4'	Total/NA	Solid	5030C	
MB 885-8091/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 885-8091/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCS 885-8091/3-A	Lab Control Sample	Total/NA	Solid	5030C	

Prep Batch: 8103

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7515-15	BH23-35@1'	Total/NA	Solid	5030C	
885-7515-16	BH23-35@3'	Total/NA	Solid	5030C	
885-7515-17	BH23-35@4'	Total/NA	Solid	5030C	
885-7515-18	BH23-36@1'	Total/NA	Solid	5030C	
885-7515-19	BH23-36@3'	Total/NA	Solid	5030C	
885-7515-20	BH23-36@4'	Total/NA	Solid	5030C	
885-7515-21	BH23-37@1'	Total/NA	Solid	5030C	
885-7515-22	BH23-37@3'	Total/NA	Solid	5030C	
885-7515-23	BH23-37@4'	Total/NA	Solid	5030C	
885-7515-24	BH23-38@1'	Total/NA	Solid	5030C	
885-7515-25	BH23-38@3'	Total/NA	Solid	5030C	
885-7515-26	BH23-38@4'	Total/NA	Solid	5030C	
885-7515-27	BH23-39@1'	Total/NA	Solid	5030C	
885-7515-28	BH23-39@3'	Total/NA	Solid	5030C	
885-7515-29	BH23-39@4'	Total/NA	Solid	5030C	
885-7515-30	BH23-39@6'	Total/NA	Solid	5030C	
885-7515-31	BH23-40@1'	Total/NA	Solid	5030C	
885-7515-32	BH23-40@3'	Total/NA	Solid	5030C	
885-7515-33	BH23-40@4'	Total/NA	Solid	5030C	
885-7515-34	BH23-40@6'	Total/NA	Solid	5030C	
MB 885-8103/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 885-8103/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCS 885-8103/3-A	Lab Control Sample	Total/NA	Solid	5030C	
885-7515-15 MS	BH23-35@1'	Total/NA	Solid	5030C	
885-7515-15 MSD	BH23-35@1'	Total/NA	Solid	5030C	
885-7515-16 MS	BH23-35@3'	Total/NA	Solid	5030C	
885-7515-16 MSD	BH23-35@3'	Total/NA	Solid	5030C	

Prep Batch: 8110

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7515-35	BH23-41@1'	Total/NA	Solid	5030C	

Eurofins Albuquerque

7/26/2024

QC Association Summary

Client: Vertex

Job ID: 885-7515-1

Project/Site: Spud 16 10H

GC VOA (Continued)

Prep Batch: 8110 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7515-36	BH23-41@3'	Total/NA	Solid	5030C	
885-7515-37	BH23-41@4'	Total/NA	Solid	5030C	
885-7515-38	BH23-41@6'	Total/NA	Solid	5030C	
MB 885-8110/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 885-8110/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCS 885-8110/3-A	Lab Control Sample	Total/NA	Solid	5030C	
885-7515-35 MS	BH23-41@1'	Total/NA	Solid	5030C	
885-7515-35 MSD	BH23-41@1'	Total/NA	Solid	5030C	
885-7515-36 MS	BH23-41@3'	Total/NA	Solid	5030C	
885-7515-36 MSD	BH23-41@3'	Total/NA	Solid	5030C	

Analysis Batch: 8221

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7515-1	BH23-25@1'	Total/NA	Solid	8015M/D	8091
885-7515-2	BH23-25@3'	Total/NA	Solid	8015M/D	8091
885-7515-3	BH23-25@4'	Total/NA	Solid	8015M/D	8091
885-7515-4	BH23-25@5'	Total/NA	Solid	8015M/D	8091
885-7515-5	BH23-25@6'	Total/NA	Solid	8015M/D	8091
885-7515-6	BH23-32@1'	Total/NA	Solid	8015M/D	8091
885-7515-7	BH23-32@3'	Total/NA	Solid	8015M/D	8091
885-7515-8	BH23-32@4'	Total/NA	Solid	8015M/D	8091
885-7515-9	BH23-33@1'	Total/NA	Solid	8015M/D	8091
885-7515-10	BH23-33@3'	Total/NA	Solid	8015M/D	8091
885-7515-11	BH23-33@4'	Total/NA	Solid	8015M/D	8091
885-7515-12	BH23-34@1'	Total/NA	Solid	8015M/D	8091
885-7515-13	BH23-34@3'	Total/NA	Solid	8015M/D	8091
885-7515-14	BH23-34@4'	Total/NA	Solid	8015M/D	8091
885-7515-35	BH23-41@1'	Total/NA	Solid	8015M/D	8110
885-7515-36	BH23-41@3'	Total/NA	Solid	8015M/D	8110
885-7515-37	BH23-41@4'	Total/NA	Solid	8015M/D	8110
885-7515-38	BH23-41@6'	Total/NA	Solid	8015M/D	8110
MB 885-8091/1-A	Method Blank	Total/NA	Solid	8015M/D	8091
MB 885-8110/1-A	Method Blank	Total/NA	Solid	8015M/D	8110
LCS 885-8091/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	8091
LCS 885-8110/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	8110
885-7515-35 MS	BH23-41@1'	Total/NA	Solid	8015M/D	8110
885-7515-35 MSD	BH23-41@1'	Total/NA	Solid	8015M/D	8110

Analysis Batch: 8222

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7515-1	BH23-25@1'	Total/NA	Solid	8021B	8091
885-7515-2	BH23-25@3'	Total/NA	Solid	8021B	8091
885-7515-3	BH23-25@4'	Total/NA	Solid	8021B	8091
885-7515-4	BH23-25@5'	Total/NA	Solid	8021B	8091
885-7515-5	BH23-25@6'	Total/NA	Solid	8021B	8091
885-7515-6	BH23-32@1'	Total/NA	Solid	8021B	8091
885-7515-7	BH23-32@3'	Total/NA	Solid	8021B	8091
885-7515-8	BH23-32@4'	Total/NA	Solid	8021B	8091
885-7515-9	BH23-33@1'	Total/NA	Solid	8021B	8091
885-7515-10	BH23-33@3'	Total/NA	Solid	8021B	8091
885-7515-11	BH23-33@4'	Total/NA	Solid	8021B	8091

Eurofins Albuquerque

QC Association Summary

Client: Vertex

Project/Site: Spud 16 10H

Job ID: 885-7515-1

GC VOA (Continued)

Analysis Batch: 8222 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7515-12	BH23-34@1'	Total/NA	Solid	8021B	8091
885-7515-13	BH23-34@3'	Total/NA	Solid	8021B	8091
885-7515-14	BH23-34@4'	Total/NA	Solid	8021B	8091
885-7515-35	BH23-41@1'	Total/NA	Solid	8021B	8110
885-7515-36	BH23-41@3'	Total/NA	Solid	8021B	8110
885-7515-37	BH23-41@4'	Total/NA	Solid	8021B	8110
885-7515-38	BH23-41@6'	Total/NA	Solid	8021B	8110
MB 885-8091/1-A	Method Blank	Total/NA	Solid	8021B	8091
MB 885-8110/1-A	Method Blank	Total/NA	Solid	8021B	8110
LCS 885-8091/3-A	Lab Control Sample	Total/NA	Solid	8021B	8091
LCS 885-8110/3-A	Lab Control Sample	Total/NA	Solid	8021B	8110
885-7515-36 MS	BH23-41@3'	Total/NA	Solid	8021B	8110
885-7515-36 MSD	BH23-41@3'	Total/NA	Solid	8021B	8110

Analysis Batch: 8269

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7515-15	BH23-35@1'	Total/NA	Solid	8015M/D	8103
885-7515-16	BH23-35@3'	Total/NA	Solid	8015M/D	8103
885-7515-17	BH23-35@4'	Total/NA	Solid	8015M/D	8103
885-7515-18	BH23-36@1'	Total/NA	Solid	8015M/D	8103
885-7515-19	BH23-36@3'	Total/NA	Solid	8015M/D	8103
885-7515-20	BH23-36@4'	Total/NA	Solid	8015M/D	8103
885-7515-21	BH23-37@1'	Total/NA	Solid	8015M/D	8103
885-7515-22	BH23-37@3'	Total/NA	Solid	8015M/D	8103
885-7515-23	BH23-37@4'	Total/NA	Solid	8015M/D	8103
885-7515-24	BH23-38@1'	Total/NA	Solid	8015M/D	8103
885-7515-25	BH23-38@3'	Total/NA	Solid	8015M/D	8103
885-7515-26	BH23-38@4'	Total/NA	Solid	8015M/D	8103
885-7515-27	BH23-39@1'	Total/NA	Solid	8015M/D	8103
885-7515-28	BH23-39@3'	Total/NA	Solid	8015M/D	8103
885-7515-29	BH23-39@4'	Total/NA	Solid	8015M/D	8103
885-7515-30	BH23-39@6'	Total/NA	Solid	8015M/D	8103
885-7515-31	BH23-40@1'	Total/NA	Solid	8015M/D	8103
885-7515-32	BH23-40@3'	Total/NA	Solid	8015M/D	8103
885-7515-33	BH23-40@4'	Total/NA	Solid	8015M/D	8103
885-7515-34	BH23-40@6'	Total/NA	Solid	8015M/D	8103
MB 885-8103/1-A	Method Blank	Total/NA	Solid	8015M/D	8103
LCS 885-8103/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	8103
885-7515-15 MS	BH23-35@1'	Total/NA	Solid	8015M/D	8103
885-7515-15 MSD	BH23-35@1'	Total/NA	Solid	8015M/D	8103

Analysis Batch: 8270

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7515-15	BH23-35@1'	Total/NA	Solid	8021B	8103
885-7515-16	BH23-35@3'	Total/NA	Solid	8021B	8103
885-7515-17	BH23-35@4'	Total/NA	Solid	8021B	8103
885-7515-18	BH23-36@1'	Total/NA	Solid	8021B	8103
885-7515-19	BH23-36@3'	Total/NA	Solid	8021B	8103
885-7515-20	BH23-36@4'	Total/NA	Solid	8021B	8103
885-7515-21	BH23-37@1'	Total/NA	Solid	8021B	8103
885-7515-22	BH23-37@3'	Total/NA	Solid	8021B	8103

Eurofins Albuquerque

QC Association Summary

Client: Vertex

Project/Site: Spud 16 10H

Job ID: 885-7515-1

GC VOA (Continued)

Analysis Batch: 8270 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7515-23	BH23-37@4'	Total/NA	Solid	8021B	8103
885-7515-24	BH23-38@1'	Total/NA	Solid	8021B	8103
885-7515-25	BH23-38@3'	Total/NA	Solid	8021B	8103
885-7515-26	BH23-38@4'	Total/NA	Solid	8021B	8103
885-7515-27	BH23-39@1'	Total/NA	Solid	8021B	8103
885-7515-28	BH23-39@3'	Total/NA	Solid	8021B	8103
885-7515-29	BH23-39@4'	Total/NA	Solid	8021B	8103
885-7515-30	BH23-39@6'	Total/NA	Solid	8021B	8103
885-7515-31	BH23-40@1'	Total/NA	Solid	8021B	8103
885-7515-32	BH23-40@3'	Total/NA	Solid	8021B	8103
885-7515-33	BH23-40@4'	Total/NA	Solid	8021B	8103
885-7515-34	BH23-40@6'	Total/NA	Solid	8021B	8103
MB 885-8103/1-A	Method Blank	Total/NA	Solid	8021B	8103
LCS 885-8103/3-A	Lab Control Sample	Total/NA	Solid	8021B	8103
885-7515-16 MS	BH23-35@3'	Total/NA	Solid	8021B	8103
885-7515-16 MSD	BH23-35@3'	Total/NA	Solid	8021B	8103

GC Semi VOA

Analysis Batch: 8141

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7515-5	BH23-25@6'	Total/NA	Solid	8015M/D	8147
885-7515-6	BH23-32@1'	Total/NA	Solid	8015M/D	8147
885-7515-7	BH23-32@3'	Total/NA	Solid	8015M/D	8147
885-7515-10	BH23-33@3'	Total/NA	Solid	8015M/D	8147
885-7515-11	BH23-33@4'	Total/NA	Solid	8015M/D	8147
885-7515-12	BH23-34@1'	Total/NA	Solid	8015M/D	8147
885-7515-13	BH23-34@3'	Total/NA	Solid	8015M/D	8147
885-7515-14	BH23-34@4'	Total/NA	Solid	8015M/D	8147
885-7515-15	BH23-35@1'	Total/NA	Solid	8015M/D	8166
885-7515-16	BH23-35@3'	Total/NA	Solid	8015M/D	8166
885-7515-17	BH23-35@4'	Total/NA	Solid	8015M/D	8166
885-7515-18	BH23-36@1'	Total/NA	Solid	8015M/D	8166
885-7515-19	BH23-36@3'	Total/NA	Solid	8015M/D	8166
885-7515-20	BH23-36@4'	Total/NA	Solid	8015M/D	8166
885-7515-21	BH23-37@1'	Total/NA	Solid	8015M/D	8166
885-7515-22	BH23-37@3'	Total/NA	Solid	8015M/D	8166
885-7515-23	BH23-37@4'	Total/NA	Solid	8015M/D	8166
885-7515-24	BH23-38@1'	Total/NA	Solid	8015M/D	8166
885-7515-25	BH23-38@3'	Total/NA	Solid	8015M/D	8166
885-7515-26	BH23-38@4'	Total/NA	Solid	8015M/D	8166
885-7515-27	BH23-39@1'	Total/NA	Solid	8015M/D	8166
885-7515-28	BH23-39@3'	Total/NA	Solid	8015M/D	8166
885-7515-30	BH23-39@6'	Total/NA	Solid	8015M/D	8166
885-7515-31	BH23-40@1'	Total/NA	Solid	8015M/D	8166
885-7515-32	BH23-40@3'	Total/NA	Solid	8015M/D	8166
885-7515-33	BH23-40@4'	Total/NA	Solid	8015M/D	8166
885-7515-34	BH23-40@6'	Total/NA	Solid	8015M/D	8166
MB 885-8147/1-A	Method Blank	Total/NA	Solid	8015M/D	8147
MB 885-8166/1-A	Method Blank	Total/NA	Solid	8015M/D	8166
LCS 885-8147/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	8147

Eurofins Albuquerque

7/26/2024

QC Association Summary

Client: Vertex

Project/Site: Spud 16 10H

Job ID: 885-7515-1

GC Semi VOA (Continued)

Analysis Batch: 8141 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 885-8166/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	8166
885-7515-14 MS	BH23-34@4'	Total/NA	Solid	8015M/D	8147
885-7515-14 MSD	BH23-34@4'	Total/NA	Solid	8015M/D	8147
885-7515-34 MS	BH23-40@6'	Total/NA	Solid	8015M/D	8166
885-7515-34 MSD	BH23-40@6'	Total/NA	Solid	8015M/D	8166

Prep Batch: 8147

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7515-1	BH23-25@1'	Total/NA	Solid	SHAKE	
885-7515-2	BH23-25@3'	Total/NA	Solid	SHAKE	
885-7515-3	BH23-25@4'	Total/NA	Solid	SHAKE	
885-7515-4	BH23-25@5'	Total/NA	Solid	SHAKE	
885-7515-5	BH23-25@6'	Total/NA	Solid	SHAKE	
885-7515-6	BH23-32@1'	Total/NA	Solid	SHAKE	
885-7515-7	BH23-32@3'	Total/NA	Solid	SHAKE	
885-7515-8	BH23-32@4'	Total/NA	Solid	SHAKE	
885-7515-9	BH23-33@1'	Total/NA	Solid	SHAKE	
885-7515-10	BH23-33@3'	Total/NA	Solid	SHAKE	
885-7515-11	BH23-33@4'	Total/NA	Solid	SHAKE	
885-7515-12	BH23-34@1'	Total/NA	Solid	SHAKE	
885-7515-13	BH23-34@3'	Total/NA	Solid	SHAKE	
885-7515-14	BH23-34@4'	Total/NA	Solid	SHAKE	
MB 885-8147/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-8147/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	
885-7515-14 MS	BH23-34@4'	Total/NA	Solid	SHAKE	
885-7515-14 MSD	BH23-34@4'	Total/NA	Solid	SHAKE	

Prep Batch: 8166

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7515-15	BH23-35@1'	Total/NA	Solid	SHAKE	
885-7515-16	BH23-35@3'	Total/NA	Solid	SHAKE	
885-7515-17	BH23-35@4'	Total/NA	Solid	SHAKE	
885-7515-18	BH23-36@1'	Total/NA	Solid	SHAKE	
885-7515-19	BH23-36@3'	Total/NA	Solid	SHAKE	
885-7515-20	BH23-36@4'	Total/NA	Solid	SHAKE	
885-7515-21	BH23-37@1'	Total/NA	Solid	SHAKE	
885-7515-22	BH23-37@3'	Total/NA	Solid	SHAKE	
885-7515-23	BH23-37@4'	Total/NA	Solid	SHAKE	
885-7515-24	BH23-38@1'	Total/NA	Solid	SHAKE	
885-7515-25	BH23-38@3'	Total/NA	Solid	SHAKE	
885-7515-26	BH23-38@4'	Total/NA	Solid	SHAKE	
885-7515-27	BH23-39@1'	Total/NA	Solid	SHAKE	
885-7515-28	BH23-39@3'	Total/NA	Solid	SHAKE	
885-7515-29	BH23-39@4'	Total/NA	Solid	SHAKE	
885-7515-30	BH23-39@6'	Total/NA	Solid	SHAKE	
885-7515-31	BH23-40@1'	Total/NA	Solid	SHAKE	
885-7515-32	BH23-40@3'	Total/NA	Solid	SHAKE	
885-7515-33	BH23-40@4'	Total/NA	Solid	SHAKE	
885-7515-34	BH23-40@6'	Total/NA	Solid	SHAKE	
MB 885-8166/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-8166/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	

Eurofins Albuquerque

QC Association Summary

Client: Vertex

Project/Site: Spud 16 10H

Job ID: 885-7515-1

GC Semi VOA (Continued)

Prep Batch: 8166 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7515-34 MS	BH23-40@6'	Total/NA	Solid	SHAKE	
885-7515-34 MSD	BH23-40@6'	Total/NA	Solid	SHAKE	

Analysis Batch: 8225

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7515-1	BH23-25@1'	Total/NA	Solid	8015M/D	8147
885-7515-2	BH23-25@3'	Total/NA	Solid	8015M/D	8147
885-7515-3	BH23-25@4'	Total/NA	Solid	8015M/D	8147
885-7515-4	BH23-25@5'	Total/NA	Solid	8015M/D	8147
885-7515-8	BH23-32@4'	Total/NA	Solid	8015M/D	8147
885-7515-9	BH23-33@1'	Total/NA	Solid	8015M/D	8147
885-7515-29	BH23-39@4'	Total/NA	Solid	8015M/D	8166
885-7515-35	BH23-41@1'	Total/NA	Solid	8015M/D	8261
885-7515-36	BH23-41@3'	Total/NA	Solid	8015M/D	8261
885-7515-37	BH23-41@4'	Total/NA	Solid	8015M/D	8261
885-7515-38	BH23-41@6'	Total/NA	Solid	8015M/D	8261
MB 885-8261/1-A	Method Blank	Total/NA	Solid	8015M/D	8261
LCS 885-8261/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	8261
885-7515-38 MS	BH23-41@6'	Total/NA	Solid	8015M/D	8261
885-7515-38 MSD	BH23-41@6'	Total/NA	Solid	8015M/D	8261

Prep Batch: 8261

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7515-35	BH23-41@1'	Total/NA	Solid	SHAKE	
885-7515-36	BH23-41@3'	Total/NA	Solid	SHAKE	
885-7515-37	BH23-41@4'	Total/NA	Solid	SHAKE	
885-7515-38	BH23-41@6'	Total/NA	Solid	SHAKE	
MB 885-8261/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-8261/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	
885-7515-38 MS	BH23-41@6'	Total/NA	Solid	SHAKE	
885-7515-38 MSD	BH23-41@6'	Total/NA	Solid	SHAKE	

HPLC/IC

Prep Batch: 8233

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7515-1	BH23-25@1'	Total/NA	Solid	300_Prep	
885-7515-2	BH23-25@3'	Total/NA	Solid	300_Prep	
885-7515-3	BH23-25@4'	Total/NA	Solid	300_Prep	
885-7515-4	BH23-25@5'	Total/NA	Solid	300_Prep	
885-7515-5	BH23-25@6'	Total/NA	Solid	300_Prep	
885-7515-6	BH23-32@1'	Total/NA	Solid	300_Prep	
885-7515-7	BH23-32@3'	Total/NA	Solid	300_Prep	
885-7515-8	BH23-32@4'	Total/NA	Solid	300_Prep	
885-7515-9	BH23-33@1'	Total/NA	Solid	300_Prep	
885-7515-10	BH23-33@3'	Total/NA	Solid	300_Prep	
885-7515-11	BH23-33@4'	Total/NA	Solid	300_Prep	
885-7515-12	BH23-34@1'	Total/NA	Solid	300_Prep	
MB 885-8233/2-A	Method Blank	Total/NA	Solid	300_Prep	
LCS 885-8233/3-A	Lab Control Sample	Total/NA	Solid	300_Prep	
MRL 885-8233/1-A	Lab Control Sample	Total/NA	Solid	300_Prep	

Eurofins Albuquerque

QC Association Summary

Client: Vertex

Project/Site: Spud 16 10H

Job ID: 885-7515-1

HPLC/IC

Prep Batch: 8240

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7515-13	BH23-34@3'	Total/NA	Solid	300_Prep	
885-7515-14	BH23-34@4'	Total/NA	Solid	300_Prep	
885-7515-15	BH23-35@1'	Total/NA	Solid	300_Prep	
885-7515-16	BH23-35@3'	Total/NA	Solid	300_Prep	
885-7515-17	BH23-35@4'	Total/NA	Solid	300_Prep	
885-7515-18	BH23-36@1'	Total/NA	Solid	300_Prep	
885-7515-19	BH23-36@3'	Total/NA	Solid	300_Prep	
885-7515-20	BH23-36@4'	Total/NA	Solid	300_Prep	
885-7515-21	BH23-37@1'	Total/NA	Solid	300_Prep	
885-7515-22	BH23-37@3'	Total/NA	Solid	300_Prep	
885-7515-23	BH23-37@4'	Total/NA	Solid	300_Prep	
885-7515-24	BH23-38@1'	Total/NA	Solid	300_Prep	
885-7515-25	BH23-38@3'	Total/NA	Solid	300_Prep	
885-7515-26	BH23-38@4'	Total/NA	Solid	300_Prep	
885-7515-27	BH23-39@1'	Total/NA	Solid	300_Prep	
885-7515-28	BH23-39@3'	Total/NA	Solid	300_Prep	
885-7515-29	BH23-39@4'	Total/NA	Solid	300_Prep	
885-7515-30	BH23-39@6'	Total/NA	Solid	300_Prep	
885-7515-31	BH23-40@1'	Total/NA	Solid	300_Prep	
885-7515-32	BH23-40@3'	Total/NA	Solid	300_Prep	
MB 885-8240/1-A	Method Blank	Total/NA	Solid	300_Prep	
LCS 885-8240/2-A	Lab Control Sample	Total/NA	Solid	300_Prep	

Analysis Batch: 8273

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7515-1	BH23-25@1'	Total/NA	Solid	300.0	8233
885-7515-6	BH23-32@1'	Total/NA	Solid	300.0	8233
885-7515-9	BH23-33@1'	Total/NA	Solid	300.0	8233
885-7515-18	BH23-36@1'	Total/NA	Solid	300.0	8240
885-7515-21	BH23-37@1'	Total/NA	Solid	300.0	8240
MB 885-8233/2-A	Method Blank	Total/NA	Solid	300.0	8233
MB 885-8240/1-A	Method Blank	Total/NA	Solid	300.0	8240
LCS 885-8233/3-A	Lab Control Sample	Total/NA	Solid	300.0	8233
LCS 885-8240/2-A	Lab Control Sample	Total/NA	Solid	300.0	8240
MRL 885-8233/1-A	Lab Control Sample	Total/NA	Solid	300.0	8233

Prep Batch: 8293

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7515-33	BH23-40@4'	Total/NA	Solid	300_Prep	
885-7515-34	BH23-40@6'	Total/NA	Solid	300_Prep	
885-7515-35	BH23-41@1'	Total/NA	Solid	300_Prep	
885-7515-36	BH23-41@3'	Total/NA	Solid	300_Prep	
885-7515-37	BH23-41@4'	Total/NA	Solid	300_Prep	
885-7515-38	BH23-41@6'	Total/NA	Solid	300_Prep	
MB 885-8293/2-A	Method Blank	Total/NA	Solid	300_Prep	
LCS 885-8293/3-A	Lab Control Sample	Total/NA	Solid	300_Prep	

Analysis Batch: 8374

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7515-2	BH23-25@3'	Total/NA	Solid	300.0	8233
885-7515-3	BH23-25@4'	Total/NA	Solid	300.0	8233

Eurofins Albuquerque

7/26/2024

QC Association Summary

Client: Vertex

Job ID: 885-7515-1

Project/Site: Spud 16 10H

HPLC/IC (Continued)

Analysis Batch: 8374 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7515-4	BH23-25@5'	Total/NA	Solid	300.0	8233
885-7515-5	BH23-25@6'	Total/NA	Solid	300.0	8233
885-7515-7	BH23-32@3'	Total/NA	Solid	300.0	8233
885-7515-8	BH23-32@4'	Total/NA	Solid	300.0	8233
885-7515-10	BH23-33@3'	Total/NA	Solid	300.0	8233
885-7515-11	BH23-33@4'	Total/NA	Solid	300.0	8233
885-7515-12	BH23-34@1'	Total/NA	Solid	300.0	8233
885-7515-13	BH23-34@3'	Total/NA	Solid	300.0	8240
885-7515-14	BH23-34@4'	Total/NA	Solid	300.0	8240
885-7515-15	BH23-35@1'	Total/NA	Solid	300.0	8240
885-7515-16	BH23-35@3'	Total/NA	Solid	300.0	8240
885-7515-17	BH23-35@4'	Total/NA	Solid	300.0	8240
885-7515-19	BH23-36@3'	Total/NA	Solid	300.0	8240
885-7515-20	BH23-36@4'	Total/NA	Solid	300.0	8240
885-7515-22	BH23-37@3'	Total/NA	Solid	300.0	8240
885-7515-23	BH23-37@4'	Total/NA	Solid	300.0	8240
885-7515-24	BH23-38@1'	Total/NA	Solid	300.0	8240
885-7515-25	BH23-38@3'	Total/NA	Solid	300.0	8240
885-7515-26	BH23-38@4'	Total/NA	Solid	300.0	8240
885-7515-27	BH23-39@1'	Total/NA	Solid	300.0	8240
885-7515-28	BH23-39@3'	Total/NA	Solid	300.0	8240
885-7515-29	BH23-39@4'	Total/NA	Solid	300.0	8240
885-7515-30	BH23-39@6'	Total/NA	Solid	300.0	8240
885-7515-31	BH23-40@1'	Total/NA	Solid	300.0	8240
885-7515-32	BH23-40@3'	Total/NA	Solid	300.0	8240
885-7515-35	BH23-41@1'	Total/NA	Solid	300.0	8293
MB 885-8293/2-A	Method Blank	Total/NA	Solid	300.0	8293
LCS 885-8293/3-A	Lab Control Sample	Total/NA	Solid	300.0	8293

Analysis Batch: 8550

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-7515-33	BH23-40@4'	Total/NA	Solid	300.0	8293
885-7515-34	BH23-40@6'	Total/NA	Solid	300.0	8293
885-7515-36	BH23-41@3'	Total/NA	Solid	300.0	8293
885-7515-37	BH23-41@4'	Total/NA	Solid	300.0	8293
885-7515-38	BH23-41@6'	Total/NA	Solid	300.0	8293

Eurofins Albuquerque

Lab Chronicle

Client: Vertex

Job ID: 885-7515-1

Project/Site: Spud 16 10H

Client Sample ID: BH23-25@1'

Lab Sample ID: 885-7515-1

Date Collected: 07/02/24 10:37

Matrix: Solid

Date Received: 07/09/24 07:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8091	JP	EET ALB	07/09/24 13:36
Total/NA	Analysis	8015M/D		1	8221	JP	EET ALB	07/10/24 17:49
Total/NA	Prep	5030C			8091	JP	EET ALB	07/09/24 13:36
Total/NA	Analysis	8021B		1	8222	JP	EET ALB	07/10/24 17:49
Total/NA	Prep	SHAKE			8147	KR	EET ALB	07/10/24 09:15
Total/NA	Analysis	8015M/D		1	8225	KR	EET ALB	07/11/24 11:02
Total/NA	Prep	300_Prep			8233	RC	EET ALB	07/11/24 10:42
Total/NA	Analysis	300.0		20	8273	JT	EET ALB	07/11/24 15:45

Client Sample ID: BH23-25@3'

Lab Sample ID: 885-7515-2

Date Collected: 07/02/24 10:41

Matrix: Solid

Date Received: 07/09/24 07:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8091	JP	EET ALB	07/09/24 13:36
Total/NA	Analysis	8015M/D		1	8221	JP	EET ALB	07/10/24 18:12
Total/NA	Prep	5030C			8091	JP	EET ALB	07/09/24 13:36
Total/NA	Analysis	8021B		1	8222	JP	EET ALB	07/10/24 18:12
Total/NA	Prep	SHAKE			8147	KR	EET ALB	07/10/24 09:15
Total/NA	Analysis	8015M/D		10	8225	KR	EET ALB	07/11/24 11:43
Total/NA	Prep	300_Prep			8233	RC	EET ALB	07/11/24 10:42
Total/NA	Analysis	300.0		50	8374	RC	EET ALB	07/12/24 14:14

Client Sample ID: BH23-25@4'

Lab Sample ID: 885-7515-3

Date Collected: 07/02/24 10:47

Matrix: Solid

Date Received: 07/09/24 07:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8091	JP	EET ALB	07/09/24 13:36
Total/NA	Analysis	8015M/D		1	8221	JP	EET ALB	07/10/24 19:00
Total/NA	Prep	5030C			8091	JP	EET ALB	07/09/24 13:36
Total/NA	Analysis	8021B		1	8222	JP	EET ALB	07/10/24 19:00
Total/NA	Prep	SHAKE			8147	KR	EET ALB	07/10/24 09:15
Total/NA	Analysis	8015M/D		1	8225	KR	EET ALB	07/11/24 12:24
Total/NA	Prep	300_Prep			8233	RC	EET ALB	07/11/24 10:42
Total/NA	Analysis	300.0		50	8374	RC	EET ALB	07/12/24 14:27

Client Sample ID: BH23-25@5'

Lab Sample ID: 885-7515-4

Date Collected: 07/02/24 12:59

Matrix: Solid

Date Received: 07/09/24 07:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8091	JP	EET ALB	07/09/24 13:36
Total/NA	Analysis	8015M/D		1	8221	JP	EET ALB	07/10/24 19:23

Eurofins Albuquerque

Lab Chronicle

Client: Vertex
Project/Site: Spud 16 10H

Job ID: 885-7515-1

Client Sample ID: BH23-25@5'
Date Collected: 07/02/24 12:59
Date Received: 07/09/24 07:50

Lab Sample ID: 885-7515-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8091	JP	EET ALB	07/09/24 13:36
Total/NA	Analysis	8021B		1	8222	JP	EET ALB	07/10/24 19:23
Total/NA	Prep	SHAKE			8147	KR	EET ALB	07/10/24 09:15
Total/NA	Analysis	8015M/D		1	8225	KR	EET ALB	07/11/24 12:35
Total/NA	Prep	300_Prep			8233	RC	EET ALB	07/11/24 10:42
Total/NA	Analysis	300.0		50	8374	RC	EET ALB	07/12/24 14:40

Client Sample ID: BH23-25@6'
Date Collected: 07/02/24 13:09
Date Received: 07/09/24 07:50

Lab Sample ID: 885-7515-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8091	JP	EET ALB	07/09/24 13:36
Total/NA	Analysis	8015M/D		1	8221	JP	EET ALB	07/10/24 19:47
Total/NA	Prep	5030C			8091	JP	EET ALB	07/09/24 13:36
Total/NA	Analysis	8021B		1	8222	JP	EET ALB	07/10/24 19:47
Total/NA	Prep	SHAKE			8147	KR	EET ALB	07/10/24 09:15
Total/NA	Analysis	8015M/D		1	8141	KR	EET ALB	07/10/24 18:46
Total/NA	Prep	300_Prep			8233	RC	EET ALB	07/11/24 10:42
Total/NA	Analysis	300.0		100	8374	RC	EET ALB	07/12/24 15:18

Client Sample ID: BH23-32@1'
Date Collected: 07/02/24 10:54
Date Received: 07/09/24 07:50

Lab Sample ID: 885-7515-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8091	JP	EET ALB	07/09/24 13:36
Total/NA	Analysis	8015M/D		1	8221	JP	EET ALB	07/10/24 20:10
Total/NA	Prep	5030C			8091	JP	EET ALB	07/09/24 13:36
Total/NA	Analysis	8021B		1	8222	JP	EET ALB	07/10/24 20:10
Total/NA	Prep	SHAKE			8147	KR	EET ALB	07/10/24 09:15
Total/NA	Analysis	8015M/D		1	8141	KR	EET ALB	07/10/24 18:57
Total/NA	Prep	300_Prep			8233	RC	EET ALB	07/11/24 10:42
Total/NA	Analysis	300.0		20	8273	JT	EET ALB	07/11/24 17:15

Client Sample ID: BH23-32@3'
Date Collected: 07/02/24 10:57
Date Received: 07/09/24 07:50

Lab Sample ID: 885-7515-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8091	JP	EET ALB	07/09/24 13:36
Total/NA	Analysis	8015M/D		1	8221	JP	EET ALB	07/10/24 20:34
Total/NA	Prep	5030C			8091	JP	EET ALB	07/09/24 13:36
Total/NA	Analysis	8021B		1	8222	JP	EET ALB	07/10/24 20:34

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Lab Chronicle

Client: Vertex

Project/Site: Spud 16 10H

Job ID: 885-7515-1

Client Sample ID: BH23-32@3'   Lab Sample ID: 885-7515-7
Date Collected: 07/02/24 10:57   **Matrix: Solid**
Date Received: 07/09/24 07:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	SHAKE			8147	KR	EET ALB	07/10/24 09:15
Total/NA	Analysis	8015M/D		10	8141	KR	EET ALB	07/10/24 19:09
Total/NA	Prep	300_Prep			8233	RC	EET ALB	07/11/24 10:42
Total/NA	Analysis	300.0		50	8374	RC	EET ALB	07/12/24 15:31

Client Sample ID: BH23-32@4'   Lab Sample ID: 885-7515-8
Date Collected: 07/02/24 11:03   **Matrix: Solid**
Date Received: 07/09/24 07:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8091	JP	EET ALB	07/09/24 13:36
Total/NA	Analysis	8015M/D		1	8221	JP	EET ALB	07/10/24 20:57
Total/NA	Prep	5030C			8091	JP	EET ALB	07/09/24 13:36
Total/NA	Analysis	8021B		1	8222	JP	EET ALB	07/10/24 20:57
Total/NA	Prep	SHAKE			8147	KR	EET ALB	07/10/24 09:15
Total/NA	Analysis	8015M/D		10	8225	KR	EET ALB	07/11/24 12:46
Total/NA	Prep	300_Prep			8233	RC	EET ALB	07/11/24 10:42
Total/NA	Analysis	300.0		50	8374	RC	EET ALB	07/12/24 15:44

Client Sample ID: BH23-33@1'   Lab Sample ID: 885-7515-9
Date Collected: 07/02/24 11:07   **Matrix: Solid**
Date Received: 07/09/24 07:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8091	JP	EET ALB	07/09/24 13:36
Total/NA	Analysis	8015M/D		1	8221	JP	EET ALB	07/10/24 21:21
Total/NA	Prep	5030C			8091	JP	EET ALB	07/09/24 13:36
Total/NA	Analysis	8021B		1	8222	JP	EET ALB	07/10/24 21:21
Total/NA	Prep	SHAKE			8147	KR	EET ALB	07/10/24 09:15
Total/NA	Analysis	8015M/D		1	8225	KR	EET ALB	07/11/24 13:27
Total/NA	Prep	300_Prep			8233	RC	EET ALB	07/11/24 10:42
Total/NA	Analysis	300.0		20	8273	JT	EET ALB	07/11/24 17:54

Client Sample ID: BH23-33@3'   Lab Sample ID: 885-7515-10
Date Collected: 07/02/24 11:11   **Matrix: Solid**
Date Received: 07/09/24 07:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8091	JP	EET ALB	07/09/24 13:36
Total/NA	Analysis	8015M/D		1	8221	JP	EET ALB	07/10/24 22:07
Total/NA	Prep	5030C			8091	JP	EET ALB	07/09/24 13:36
Total/NA	Analysis	8021B		1	8222	JP	EET ALB	07/10/24 22:07
Total/NA	Prep	SHAKE			8147	KR	EET ALB	07/10/24 09:15
Total/NA	Analysis	8015M/D		1	8141	KR	EET ALB	07/10/24 19:42

Eurofins Albuquerque

Lab Chronicle

Client: Vertex

Job ID: 885-7515-1

Project/Site: Spud 16 10H

Client Sample ID: BH23-33@3'

Date Collected: 07/02/24 11:11

Date Received: 07/09/24 07:50

Lab Sample ID: 885-7515-10

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	300_Prep			8233	RC	EET ALB	07/11/24 10:42
Total/NA	Analysis	300.0		100	8374	RC	EET ALB	07/12/24 15:57

Client Sample ID: BH23-33@4'

Date Collected: 07/02/24 11:15

Date Received: 07/09/24 07:50

Lab Sample ID: 885-7515-11

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8091	JP	EET ALB	07/09/24 13:36
Total/NA	Analysis	8015M/D		1	8221	JP	EET ALB	07/10/24 22:31
Total/NA	Prep	5030C			8091	JP	EET ALB	07/09/24 13:36
Total/NA	Analysis	8021B		1	8222	JP	EET ALB	07/10/24 22:31
Total/NA	Prep	SHAKE			8147	KR	EET ALB	07/10/24 09:15
Total/NA	Analysis	8015M/D		1	8141	KR	EET ALB	07/10/24 19:53
Total/NA	Prep	300_Prep			8233	RC	EET ALB	07/11/24 10:42
Total/NA	Analysis	300.0		50	8374	RC	EET ALB	07/12/24 16:10

Client Sample ID: BH23-34@1'

Date Collected: 07/02/24 11:19

Date Received: 07/09/24 07:50

Lab Sample ID: 885-7515-12

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8091	JP	EET ALB	07/09/24 13:36
Total/NA	Analysis	8015M/D		1	8221	JP	EET ALB	07/10/24 22:54
Total/NA	Prep	5030C			8091	JP	EET ALB	07/09/24 13:36
Total/NA	Analysis	8021B		1	8222	JP	EET ALB	07/10/24 22:54
Total/NA	Prep	SHAKE			8147	KR	EET ALB	07/10/24 09:15
Total/NA	Analysis	8015M/D		1	8141	KR	EET ALB	07/10/24 20:05
Total/NA	Prep	300_Prep			8233	RC	EET ALB	07/11/24 10:50
Total/NA	Analysis	300.0		50	8374	RC	EET ALB	07/12/24 16:23

Client Sample ID: BH23-34@3'

Date Collected: 07/02/24 11:23

Date Received: 07/09/24 07:50

Lab Sample ID: 885-7515-13

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8091	JP	EET ALB	07/09/24 13:36
Total/NA	Analysis	8015M/D		1	8221	JP	EET ALB	07/10/24 23:41
Total/NA	Prep	5030C			8091	JP	EET ALB	07/09/24 13:36
Total/NA	Analysis	8021B		1	8222	JP	EET ALB	07/10/24 23:41
Total/NA	Prep	SHAKE			8147	KR	EET ALB	07/10/24 09:15
Total/NA	Analysis	8015M/D		1	8141	KR	EET ALB	07/10/24 20:16
Total/NA	Prep	300_Prep			8240	RC	EET ALB	07/11/24 11:55
Total/NA	Analysis	300.0		50	8374	RC	EET ALB	07/12/24 16:36

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Lab Chronicle

Client: Vertex
Project/Site: Spud 16 10H

Client Sample ID: BH23-34@4'
Date Collected: 07/02/24 11:27
Date Received: 07/09/24 07:50

Lab Sample ID: 885-7515-14
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8091	JP	EET ALB	07/09/24 13:36
Total/NA	Analysis	8015M/D		1	8221	JP	EET ALB	07/11/24 00:04
Total/NA	Prep	5030C			8091	JP	EET ALB	07/09/24 13:36
Total/NA	Analysis	8021B		1	8222	JP	EET ALB	07/11/24 00:04
Total/NA	Prep	SHAKE			8147	KR	EET ALB	07/10/24 09:15
Total/NA	Analysis	8015M/D		1	8141	KR	EET ALB	07/10/24 20:27
Total/NA	Prep	300_Prep			8240	RC	EET ALB	07/11/24 11:55
Total/NA	Analysis	300.0		100	8374	RC	EET ALB	07/12/24 16:48

Client Sample ID: BH23-35@1'
Date Collected: 07/02/24 11:30
Date Received: 07/09/24 07:50

Lab Sample ID: 885-7515-15
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8103	JP	EET ALB	07/09/24 15:34
Total/NA	Analysis	8015M/D		1	8269	RA	EET ALB	07/10/24 22:59
Total/NA	Prep	5030C			8103	JP	EET ALB	07/09/24 15:34
Total/NA	Analysis	8021B		1	8270	RA	EET ALB	07/10/24 22:59
Total/NA	Prep	SHAKE			8166	KR	EET ALB	07/10/24 11:23
Total/NA	Analysis	8015M/D		1	8141	KR	EET ALB	07/10/24 21:34
Total/NA	Prep	300_Prep			8240	RC	EET ALB	07/11/24 11:55
Total/NA	Analysis	300.0		50	8374	RC	EET ALB	07/12/24 17:01

Client Sample ID: BH23-35@3'
Date Collected: 07/02/24 11:33
Date Received: 07/09/24 07:50

Lab Sample ID: 885-7515-16
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8103	JP	EET ALB	07/09/24 15:34
Total/NA	Analysis	8015M/D		1	8269	RA	EET ALB	07/11/24 00:05
Total/NA	Prep	5030C			8103	JP	EET ALB	07/09/24 15:34
Total/NA	Analysis	8021B		1	8270	RA	EET ALB	07/11/24 00:05
Total/NA	Prep	SHAKE			8166	KR	EET ALB	07/10/24 11:23
Total/NA	Analysis	8015M/D		1	8141	KR	EET ALB	07/10/24 21:45
Total/NA	Prep	300_Prep			8240	RC	EET ALB	07/11/24 11:55
Total/NA	Analysis	300.0		100	8374	RC	EET ALB	07/12/24 17:14

Client Sample ID: BH23-35@4'
Date Collected: 07/02/24 11:37
Date Received: 07/09/24 07:50

Lab Sample ID: 885-7515-17
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8103	JP	EET ALB	07/09/24 15:34
Total/NA	Analysis	8015M/D		1	8269	RA	EET ALB	07/11/24 01:10

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Lab Chronicle

Client: Vertex

Project/Site: Spud 16 10H

Job ID: 885-7515-1

Client Sample ID: BH23-35@4'

Date Collected: 07/02/24 11:37

Date Received: 07/09/24 07:50

Lab Sample ID: 885-7515-17

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8103	JP	EET ALB	07/09/24 15:34
Total/NA	Analysis	8021B		1	8270	RA	EET ALB	07/11/24 01:10
Total/NA	Prep	SHAKE			8166	KR	EET ALB	07/10/24 11:23
Total/NA	Analysis	8015M/D		1	8141	KR	EET ALB	07/10/24 21:56
Total/NA	Prep	300_Prep			8240	RC	EET ALB	07/11/24 11:55
Total/NA	Analysis	300.0		100	8374	RC	EET ALB	07/12/24 17:53

Client Sample ID: BH23-36@1'

Date Collected: 07/02/24 11:42

Date Received: 07/09/24 07:50

Lab Sample ID: 885-7515-18

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8103	JP	EET ALB	07/09/24 15:34
Total/NA	Analysis	8015M/D		1	8269	RA	EET ALB	07/11/24 01:32
Total/NA	Prep	5030C			8103	JP	EET ALB	07/09/24 15:34
Total/NA	Analysis	8021B		1	8270	RA	EET ALB	07/11/24 01:32
Total/NA	Prep	SHAKE			8166	KR	EET ALB	07/10/24 11:23
Total/NA	Analysis	8015M/D		1	8141	KR	EET ALB	07/10/24 22:07
Total/NA	Prep	300_Prep			8240	RC	EET ALB	07/11/24 11:55
Total/NA	Analysis	300.0		20	8273	JT	EET ALB	07/11/24 20:41

Client Sample ID: BH23-36@3'

Date Collected: 07/02/24 11:45

Date Received: 07/09/24 07:50

Lab Sample ID: 885-7515-19

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8103	JP	EET ALB	07/09/24 15:34
Total/NA	Analysis	8015M/D		1	8269	RA	EET ALB	07/11/24 01:53
Total/NA	Prep	5030C			8103	JP	EET ALB	07/09/24 15:34
Total/NA	Analysis	8021B		1	8270	RA	EET ALB	07/11/24 01:53
Total/NA	Prep	SHAKE			8166	KR	EET ALB	07/10/24 11:23
Total/NA	Analysis	8015M/D		1	8141	KR	EET ALB	07/10/24 22:18
Total/NA	Prep	300_Prep			8240	RC	EET ALB	07/11/24 11:55
Total/NA	Analysis	300.0		50	8374	RC	EET ALB	07/12/24 18:06

Client Sample ID: BH23-36@4'

Date Collected: 07/02/24 11:48

Date Received: 07/09/24 07:50

Lab Sample ID: 885-7515-20

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8103	JP	EET ALB	07/09/24 15:34
Total/NA	Analysis	8015M/D		1	8269	RA	EET ALB	07/11/24 02:15
Total/NA	Prep	5030C			8103	JP	EET ALB	07/09/24 15:34
Total/NA	Analysis	8021B		1	8270	RA	EET ALB	07/11/24 02:15

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Lab Chronicle

Client: Vertex

Project/Site: Spud 16 10H

Job ID: 885-7515-1

Client Sample ID: BH23-36@4'　　　　　　　　　　　Lab Sample ID: 885-7515-20

Date Collected: 07/02/24 11:48　　　　　　　　　　　　　　　　　**Matrix: Solid**

Date Received: 07/09/24 07:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	SHAKE			8166	KR	EET ALB	07/10/24 11:23
Total/NA	Analysis	8015M/D		1	8141	KR	EET ALB	07/10/24 22:29
Total/NA	Prep	300_Prep			8240	RC	EET ALB	07/11/24 11:55
Total/NA	Analysis	300.0		50	8374	RC	EET ALB	07/12/24 18:19

Client Sample ID: BH23-37@1'　　　　　　　　　　　Lab Sample ID: 885-7515-21

Date Collected: 07/02/24 11:52　　　　　　　　　　　　　　　　　**Matrix: Solid**

Date Received: 07/09/24 07:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8103	JP	EET ALB	07/09/24 15:34
Total/NA	Analysis	8015M/D		1	8269	RA	EET ALB	07/11/24 02:37
Total/NA	Prep	5030C			8103	JP	EET ALB	07/09/24 15:34
Total/NA	Analysis	8021B		1	8270	RA	EET ALB	07/11/24 02:37
Total/NA	Prep	SHAKE			8166	KR	EET ALB	07/10/24 11:23
Total/NA	Analysis	8015M/D		1	8141	KR	EET ALB	07/10/24 22:41
Total/NA	Prep	300_Prep			8240	RC	EET ALB	07/11/24 11:55
Total/NA	Analysis	300.0		20	8273	JT	EET ALB	07/11/24 21:20

Client Sample ID: BH23-37@3'　　　　　　　　　　　Lab Sample ID: 885-7515-22

Date Collected: 07/02/24 11:54　　　　　　　　　　　　　　　　　**Matrix: Solid**

Date Received: 07/09/24 07:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8103	JP	EET ALB	07/09/24 15:34
Total/NA	Analysis	8015M/D		1	8269	RA	EET ALB	07/11/24 02:59
Total/NA	Prep	5030C			8103	JP	EET ALB	07/09/24 15:34
Total/NA	Analysis	8021B		1	8270	RA	EET ALB	07/11/24 02:59
Total/NA	Prep	SHAKE			8166	KR	EET ALB	07/10/24 11:23
Total/NA	Analysis	8015M/D		1	8141	KR	EET ALB	07/10/24 22:52
Total/NA	Prep	300_Prep			8240	RC	EET ALB	07/11/24 11:55
Total/NA	Analysis	300.0		50	8374	RC	EET ALB	07/12/24 18:31

Client Sample ID: BH23-37@4'　　　　　　　　　　　Lab Sample ID: 885-7515-23

Date Collected: 07/02/24 11:58　　　　　　　　　　　　　　　　　**Matrix: Solid**

Date Received: 07/09/24 07:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8103	JP	EET ALB	07/09/24 15:34
Total/NA	Analysis	8015M/D		1	8269	RA	EET ALB	07/11/24 03:20
Total/NA	Prep	5030C			8103	JP	EET ALB	07/09/24 15:34
Total/NA	Analysis	8021B		1	8270	RA	EET ALB	07/11/24 03:20
Total/NA	Prep	SHAKE			8166	KR	EET ALB	07/10/24 11:23
Total/NA	Analysis	8015M/D		1	8141	KR	EET ALB	07/10/24 23:14

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Client: Vertex

Project/Site: Spud 16 10H

Job ID: 885-7515-1

Client Sample ID: BH23-37@4'   Lab Sample ID: 885-7515-23
Date Collected: 07/02/24 11:58   **Matrix: Solid**
Date Received: 07/09/24 07:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	300_Prep			8240	RC	EET ALB	07/11/24 11:55
Total/NA	Analysis	300.0		50	8374	RC	EET ALB	07/12/24 18:44

Client Sample ID: BH23-38@1'   Lab Sample ID: 885-7515-24
Date Collected: 07/02/24 12:04   **Matrix: Solid**
Date Received: 07/09/24 07:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8103	JP	EET ALB	07/09/24 15:34
Total/NA	Analysis	8015M/D		1	8269	RA	EET ALB	07/11/24 03:42
Total/NA	Prep	5030C			8103	JP	EET ALB	07/09/24 15:34
Total/NA	Analysis	8021B		1	8270	RA	EET ALB	07/11/24 03:42
Total/NA	Prep	SHAKE			8166	KR	EET ALB	07/10/24 11:23
Total/NA	Analysis	8015M/D		1	8141	KR	EET ALB	07/10/24 23:26
Total/NA	Prep	300_Prep			8240	RC	EET ALB	07/11/24 11:55
Total/NA	Analysis	300.0		50	8374	RC	EET ALB	07/12/24 18:57

Client Sample ID: BH23-38@3'   Lab Sample ID: 885-7515-25
Date Collected: 07/02/24 12:09   **Matrix: Solid**
Date Received: 07/09/24 07:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8103	JP	EET ALB	07/09/24 15:34
Total/NA	Analysis	8015M/D		1	8269	RA	EET ALB	07/11/24 04:26
Total/NA	Prep	5030C			8103	JP	EET ALB	07/09/24 15:34
Total/NA	Analysis	8021B		1	8270	RA	EET ALB	07/11/24 04:26
Total/NA	Prep	SHAKE			8166	KR	EET ALB	07/10/24 11:23
Total/NA	Analysis	8015M/D		1	8141	KR	EET ALB	07/10/24 23:37
Total/NA	Prep	300_Prep			8240	RC	EET ALB	07/11/24 11:55
Total/NA	Analysis	300.0		50	8374	RC	EET ALB	07/12/24 19:10

Client Sample ID: BH23-38@4'   Lab Sample ID: 885-7515-26
Date Collected: 07/02/24 12:13   **Matrix: Solid**
Date Received: 07/09/24 07:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8103	JP	EET ALB	07/09/24 15:34
Total/NA	Analysis	8015M/D		1	8269	RA	EET ALB	07/11/24 04:48
Total/NA	Prep	5030C			8103	JP	EET ALB	07/09/24 15:34
Total/NA	Analysis	8021B		1	8270	RA	EET ALB	07/11/24 04:48
Total/NA	Prep	SHAKE			8166	KR	EET ALB	07/10/24 11:23
Total/NA	Analysis	8015M/D		1	8141	KR	EET ALB	07/10/24 23:48
Total/NA	Prep	300_Prep			8240	RC	EET ALB	07/11/24 11:55
Total/NA	Analysis	300.0		100	8374	RC	EET ALB	07/12/24 19:23

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Client: Vertex

Project/Site: Spud 16 10H

Job ID: 885-7515-1

Client Sample ID: BH23-39@1'

Lab Sample ID: 885-7515-27

Date Collected: 07/02/24 12:17

Matrix: Solid

Date Received: 07/09/24 07:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8103	JP	EET ALB	07/09/24 15:34
Total/NA	Analysis	8015M/D		1	8269	RA	EET ALB	07/11/24 05:09
Total/NA	Prep	5030C			8103	JP	EET ALB	07/09/24 15:34
Total/NA	Analysis	8021B		1	8270	RA	EET ALB	07/11/24 05:09
Total/NA	Prep	SHAKE			8166	KR	EET ALB	07/10/24 11:23
Total/NA	Analysis	8015M/D		1	8141	KR	EET ALB	07/10/24 23:59
Total/NA	Prep	300_Prep			8240	RC	EET ALB	07/11/24 11:55
Total/NA	Analysis	300.0		50	8374	RC	EET ALB	07/12/24 19:36

Client Sample ID: BH23-39@3'

Lab Sample ID: 885-7515-28

Date Collected: 07/02/24 12:21

Matrix: Solid

Date Received: 07/09/24 07:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8103	JP	EET ALB	07/09/24 15:34
Total/NA	Analysis	8015M/D		5	8269	RA	EET ALB	07/11/24 05:31
Total/NA	Prep	5030C			8103	JP	EET ALB	07/09/24 15:34
Total/NA	Analysis	8021B		1	8270	RA	EET ALB	07/11/24 05:31
Total/NA	Prep	SHAKE			8166	KR	EET ALB	07/10/24 11:23
Total/NA	Analysis	8015M/D		1	8141	KR	EET ALB	07/11/24 00:11
Total/NA	Prep	300_Prep			8240	RC	EET ALB	07/11/24 11:55
Total/NA	Analysis	300.0		500	8374	RC	EET ALB	07/12/24 19:49

Client Sample ID: BH23-39@4'

Lab Sample ID: 885-7515-29

Date Collected: 07/02/24 13:04

Matrix: Solid

Date Received: 07/09/24 07:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8103	JP	EET ALB	07/09/24 15:34
Total/NA	Analysis	8015M/D		5	8269	RA	EET ALB	07/11/24 05:53
Total/NA	Prep	5030C			8103	JP	EET ALB	07/09/24 15:34
Total/NA	Analysis	8021B		5	8270	RA	EET ALB	07/11/24 05:53
Total/NA	Prep	SHAKE			8166	KR	EET ALB	07/10/24 11:23
Total/NA	Analysis	8015M/D		2	8225	KR	EET ALB	07/11/24 13:38
Total/NA	Prep	300_Prep			8240	RC	EET ALB	07/11/24 11:55
Total/NA	Analysis	300.0		100	8374	RC	EET ALB	07/12/24 20:27

Client Sample ID: BH23-39@6'

Lab Sample ID: 885-7515-30

Date Collected: 07/02/24 12:22

Matrix: Solid

Date Received: 07/09/24 07:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8103	JP	EET ALB	07/09/24 15:34
Total/NA	Analysis	8015M/D		1	8269	RA	EET ALB	07/11/24 06:15

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Client: Vertex

Project/Site: Spud 16 10H

Job ID: 885-7515-1

Client Sample ID: BH23-39@6'

Lab Sample ID: 885-7515-30

Date Collected: 07/02/24 12:22

Matrix: Solid

Date Received: 07/09/24 07:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8103	JP	EET ALB	07/09/24 15:34
Total/NA	Analysis	8021B		1	8270	RA	EET ALB	07/11/24 06:15
Total/NA	Prep	SHAKE			8166	KR	EET ALB	07/10/24 11:23
Total/NA	Analysis	8015M/D		1	8141	KR	EET ALB	07/11/24 00:34
Total/NA	Prep	300_Prep			8240	RC	EET ALB	07/11/24 11:55
Total/NA	Analysis	300.0		500	8374	RC	EET ALB	07/12/24 20:40

Client Sample ID: BH23-40@1'

Lab Sample ID: 885-7515-31

Date Collected: 07/02/24 12:25

Matrix: Solid

Date Received: 07/09/24 07:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8103	JP	EET ALB	07/09/24 15:34
Total/NA	Analysis	8015M/D		1	8269	RA	EET ALB	07/11/24 06:37
Total/NA	Prep	5030C			8103	JP	EET ALB	07/09/24 15:34
Total/NA	Analysis	8021B		1	8270	RA	EET ALB	07/11/24 06:37
Total/NA	Prep	SHAKE			8166	KR	EET ALB	07/10/24 11:23
Total/NA	Analysis	8015M/D		1	8141	KR	EET ALB	07/11/24 00:45
Total/NA	Prep	300_Prep			8240	RC	EET ALB	07/11/24 11:55
Total/NA	Analysis	300.0		100	8374	RC	EET ALB	07/12/24 20:53

Client Sample ID: BH23-40@3'

Lab Sample ID: 885-7515-32

Date Collected: 07/02/24 12:30

Matrix: Solid

Date Received: 07/09/24 07:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8103	JP	EET ALB	07/09/24 15:34
Total/NA	Analysis	8015M/D		1	8269	RA	EET ALB	07/11/24 06:59
Total/NA	Prep	5030C			8103	JP	EET ALB	07/09/24 15:34
Total/NA	Analysis	8021B		1	8270	RA	EET ALB	07/11/24 06:59
Total/NA	Prep	SHAKE			8166	KR	EET ALB	07/10/24 11:23
Total/NA	Analysis	8015M/D		1	8141	KR	EET ALB	07/11/24 00:57
Total/NA	Prep	300_Prep			8240	RC	EET ALB	07/11/24 11:55
Total/NA	Analysis	300.0		500	8374	RC	EET ALB	07/12/24 21:06

Client Sample ID: BH23-40@4'

Lab Sample ID: 885-7515-33

Date Collected: 07/02/24 12:34

Matrix: Solid

Date Received: 07/09/24 07:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8103	JP	EET ALB	07/09/24 15:34
Total/NA	Analysis	8015M/D		1	8269	RA	EET ALB	07/11/24 07:20
Total/NA	Prep	5030C			8103	JP	EET ALB	07/09/24 15:34
Total/NA	Analysis	8021B		1	8270	RA	EET ALB	07/11/24 07:20

Eurofins Albuquerque

Lab Chronicle

Client: Vertex

Project/Site: Spud 16 10H

Job ID: 885-7515-1

Client Sample ID: BH23-40@4'

Date Collected: 07/02/24 12:34

Date Received: 07/09/24 07:50

Lab Sample ID: 885-7515-33

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	SHAKE			8166	KR	EET ALB	07/10/24 11:23
Total/NA	Analysis	8015M/D		1	8141	KR	EET ALB	07/11/24 01:08
Total/NA	Prep	300_Prep			8293	JT	EET ALB	07/12/24 07:01
Total/NA	Analysis	300.0		100	8550	JT	EET ALB	07/16/24 16:35

Client Sample ID: BH23-40@6'

Date Collected: 07/02/24 12:38

Date Received: 07/09/24 07:50

Lab Sample ID: 885-7515-34

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8103	JP	EET ALB	07/09/24 15:34
Total/NA	Analysis	8015M/D		1	8269	RA	EET ALB	07/11/24 07:42
Total/NA	Prep	5030C			8103	JP	EET ALB	07/09/24 15:34
Total/NA	Analysis	8021B		1	8270	RA	EET ALB	07/11/24 07:42
Total/NA	Prep	SHAKE			8166	KR	EET ALB	07/10/24 11:23
Total/NA	Analysis	8015M/D		1	8141	KR	EET ALB	07/11/24 01:19
Total/NA	Prep	300_Prep			8293	JT	EET ALB	07/12/24 07:01
Total/NA	Analysis	300.0		200	8550	JT	EET ALB	07/16/24 16:50

Client Sample ID: BH23-41@1'

Date Collected: 07/02/24 12:39

Date Received: 07/09/24 07:50

Lab Sample ID: 885-7515-35

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8110	AT	EET ALB	07/09/24 16:29
Total/NA	Analysis	8015M/D		1	8221	JP	EET ALB	07/11/24 01:38
Total/NA	Prep	5030C			8110	AT	EET ALB	07/09/24 16:29
Total/NA	Analysis	8021B		1	8222	JP	EET ALB	07/11/24 01:38
Total/NA	Prep	SHAKE			8261	KR	EET ALB	07/11/24 14:22
Total/NA	Analysis	8015M/D		1	8225	KR	EET ALB	07/11/24 16:33
Total/NA	Prep	300_Prep			8293	JT	EET ALB	07/12/24 07:01
Total/NA	Analysis	300.0		20	8374	RC	EET ALB	07/12/24 08:40

Client Sample ID: BH23-41@3'

Date Collected: 07/02/24 12:43

Date Received: 07/09/24 07:50

Lab Sample ID: 885-7515-36

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8110	AT	EET ALB	07/09/24 16:29
Total/NA	Analysis	8015M/D		1	8221	JP	EET ALB	07/11/24 02:48
Total/NA	Prep	5030C			8110	AT	EET ALB	07/09/24 16:29
Total/NA	Analysis	8021B		1	8222	JP	EET ALB	07/11/24 02:48
Total/NA	Prep	SHAKE			8261	KR	EET ALB	07/11/24 14:22
Total/NA	Analysis	8015M/D		1	8225	KR	EET ALB	07/11/24 16:44

Eurofins Albuquerque

Lab Chronicle

Client: Vertex

Project/Site: Spud 16 10H

Job ID: 885-7515-1

Client Sample ID: BH23-41@3'

Lab Sample ID: 885-7515-36

Date Collected: 07/02/24 12:43

Matrix: Solid

Date Received: 07/09/24 07:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	300_Prep			8293	JT	EET ALB	07/12/24 07:01
Total/NA	Analysis	300.0		50	8550	JT	EET ALB	07/16/24 17:05

Client Sample ID: BH23-41@4'

Lab Sample ID: 885-7515-37

Date Collected: 07/02/24 12:47

Matrix: Solid

Date Received: 07/09/24 07:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8110	AT	EET ALB	07/09/24 16:29
Total/NA	Analysis	8015M/D		1	8221	JP	EET ALB	07/11/24 03:58
Total/NA	Prep	5030C			8110	AT	EET ALB	07/09/24 16:29
Total/NA	Analysis	8021B		1	8222	JP	EET ALB	07/11/24 03:58
Total/NA	Prep	SHAKE			8261	KR	EET ALB	07/11/24 14:22
Total/NA	Analysis	8015M/D		1	8225	KR	EET ALB	07/11/24 16:55
Total/NA	Prep	300_Prep			8293	JT	EET ALB	07/12/24 07:01
Total/NA	Analysis	300.0		50	8550	JT	EET ALB	07/16/24 17:21

Client Sample ID: BH23-41@6'

Lab Sample ID: 885-7515-38

Date Collected: 07/02/24 12:52

Matrix: Solid

Date Received: 07/09/24 07:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			8110	AT	EET ALB	07/09/24 16:29
Total/NA	Analysis	8015M/D		1	8221	JP	EET ALB	07/11/24 04:22
Total/NA	Prep	5030C			8110	AT	EET ALB	07/09/24 16:29
Total/NA	Analysis	8021B		1	8222	JP	EET ALB	07/11/24 04:22
Total/NA	Prep	SHAKE			8261	KR	EET ALB	07/11/24 14:22
Total/NA	Analysis	8015M/D		1	8225	KR	EET ALB	07/11/24 17:06
Total/NA	Prep	300_Prep			8293	JT	EET ALB	07/12/24 07:01
Total/NA	Analysis	300.0		200	8550	JT	EET ALB	07/16/24 18:06

Laboratory References:

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

Eurofins Albuquerque

7/26/2024

Accreditation/Certification Summary

Client: Vertex

Project/Site: Spud 16 10H

Job ID: 885-7515-1

Laboratory: Eurofins Albuquerque

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

Authority	Program	Identification Number	Expiration Date
New Mexico	State	NM9425, NM0901	02-26-25

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

Analysis Method	Prep Method	Matrix	Analyte
300.0	300_Prep	Solid	Chloride
8015M/D	5030C	Solid	Gasoline Range Organics (GRO)-C6-C10
8015M/D	SHAKE	Solid	Diesel Range Organics [C10-C28]
8015M/D	SHAKE	Solid	Motor Oil Range Organics [C28-C40]
8021B	5030C	Solid	Benzene
8021B	5030C	Solid	Ethylbenzene
8021B	5030C	Solid	Toluene
8021B	5030C	Solid	Xylenes, Total

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	NM100001	02-26-25

Eurofins Albuquerque

7/26/2024

Chain-of-Custody Record

Client: Vertex (Bill to Devon)

Mailing Address:

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: Spud 16 10 H

Project #: 23E-02857

Project Manager: Chad Hensley
CHensley @ Vertexresource.com
RPlogger @ vertexresource.com

Sampler: Riley Plogger

On Ice: ☑ Yes ☐ No

# of Coolers: 1   4oz.

Cooler Temp (including CF): 1.6+0.2=1.8 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975   Fax 505-345-4107

885-7515 COC

to×3

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, NO₃, NO₂, PO₄, SO₄	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)			
7.2.24	10:37	soil	BH23-25 @ 1'	4oz Jar	Ice	1	X	X					X						
	10:41		BH23-25 @ 3'			2													
	10:47		BH23-25 @ 4'			3													
	12:59		BH23-25 @ 5'			4													
	1:09		BH23-25 @ 6'			5													
	10:54		BH23-32 @ 1'			6													
	10:57		BH23-32 @ 3'			7													
	11:03		BH23-32 @ 4'			8													
	11:07		BH23-33 @ 1'			9													
	11:11		BH23-33 @ 3'			10													
	11:15		BH23-33 @ 4'			11													
	11:19		BH23-34 @ 1'			12													

Analysis Request

Date	Time	Relinquished by	Received by	Via	Date	Time	Remarks:
			(signature)		7/8/24	1030	WO# 21165742
7/8/24	1900	(signature)	(signature)	courier	7/9/24	7:50	Dale Woodall

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 (Bill to Devon)

Mailing Address:

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: SPUD 16 10H ~~Battery~~

Project #: ~~Chad Hen~~
~~23E-02221~~ 23E-02857

Project Manager: Chad Hensley
CHensley @ vertexresource.com
RPlogger @ vertexresource.com

Sampler: Riley Plogger

On Ice: ☑ Yes   ☐ No

# of Coolers: 1   4oq

Cooler Temp (including CF): 1.6+0.2=1.8 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975   Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	BTEX / MTBE / TMB's (8021)	TPH.8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO₃, NO₂, PO₄, SO₄	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)					
7.2.24	11:23	Soil	BH23-34 @ 3'	4oz Jar	Ice	13	X	X					X									
	11:27		BH23-34 @ 4'			14																
	11:30		BH23-35 @ 1'			15																
	11:33		BH23-35 @ 3'			16																
	11:37		BH23-35 @ 4'			17																
	11:42		BH23-36 @ 1'			18																
	11:45		BH23-36 @ 3'			19																
	11:48		BH23-36 @ 4'			20																
	11:52		BH23-37 @ 1'			21																
	11:54		BH23-37 @ 3'			22																
	11:58		BH23-37 @ 4'			23																
✓	12:04	✓	BH23-38 @ 1'	✓	✓	24	✓	✓					✓									

Date	Time	Relinquished by	Received by	Via	Date	Time	Remarks:
			(signature)		7/8/24	1030	WO# ~~8115400~~
7/8/24	1900	(signature)	(signature)	courier	7/9/24	7:50	21165742
							Dale Woodall

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 (Bill to Devon)

Mailing Address:

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: SPUd 16 10H

Project #: 23E-02857

Project Manager: Chad Hensley
CHensley @ vertexresource.com

Sampler:
On Ice: ☑ Yes   ☐ No
# of Coolers: 1   4692
Cooler Temp (including CF): 1.6 to 2 = 1.8 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975   Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO₃, NO₂, PO₄, SO₄	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)				
7.2.24	12:09	Soil	BH23-38 @ 3'	4oz Jar	Ice	25	X	X					X							
	12:13		BH23-38 @ 4'			26														
	12:17		BH23-39 @ 1'			27														
	12:21		BH23-39 @ 3'			28														
	1:04		BH23-39 @ 4'			29														
	12:22		BH23-39 @ 6'			30														
	12:25		BH23-40 @ 1'			31														
	12:30		BH23-40 @ 3'			32														
	12:34		BH23-40 @ 4'			33														
	12:58		BH23-40 @ 6'			34														
	12:39		BH23-41 @ 1'			35														
	12:43		BH23-41 @ 3'			36														

Date	Time	Relinquished by	Received by	Via	Date	Time
			[signature]		7/8/24	1030
7/8/24	1900	[signature]	[signature]	Courier	7/9/24	750

Remarks: WO# 21165742
Dale Woodall

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 (Bill to Devon)

Mailing Address:

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
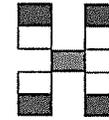
Project Name: SPud 16 10 H

Project #: 23E-02857

Project Manager: Chad Hensley
cHensley @ vertexresource.com

Sampler: Riley Plogger
On Ice: ☑ Yes   ☐ No
# of Coolers: 1   Yogo
Cooler Temp (Including CF): 1.6+0.2=1.8 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975   Fax 505-345-4107
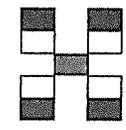
Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO₃, NO₂, PO₄, SO₄	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)					
7.2.24	12:47	Soil	BH23-41 @ 4'	4oz Jar	Ice	37	X	X					X									
7.2.24	12:52	Soil	BH23-41 @ 6'	4oz Jar	Ice	38	X	X					X									

Date	Time	Relinquished by	Received by	Via	Date	Time
			[signature]		7/2/24	1030
7/8/24	1900	[signature]	[signature]	Courier	7/2/24	7:50

Remarks: WO# 21165742
Dale woodall

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: 885-7515-1**

Login Number: 7515　　　　　　　　　　　　　　　　　　　　　　**List Source: Eurofins Albuquerque**
List Number: 1
Creator: Casarrubias, Tracy

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
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	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins

Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

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

Generated 7/19/2025 1:30:11 PM

JOB DESCRIPTION

Spud 16 State 10H

JOB NUMBER

885-28666-1

Eurofins Albuquerque
4901 Hawkins NE
Albuquerque NM 87109

See page two for job notes and contact information.

my EOL

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
7/19/2025 1:30:11 PM

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

Table of Contents

Definitions/Glossary

Client: Vertex   Job ID: 885-28666-1
Project/Site: Spud 16 State 10H

Qualifiers

GC VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance 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

Eurofins Albuquerque

Case Narrative

Client: Vertex
Project: Spud 16 State 10H

Job ID: 885-28666-1

Job ID: 885-28666-1   **Eurofins Albuquerque**

Job Narrative
885-28666-1

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 sample was received on 7/12/2025 8:15 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.8°C.

Gasoline Range Organics
Method 8015D_GRO: The matrix spike duplicate (MSD) recovery for preparation batch 885-30055 and analytical batch 885-30187 is outside acceptance limits for Gasoline Range Organics (GRO)-C6-C10. These analytes are also outside of control limits for the associated laboratory control sample (LCS). GRO recovery on instrument is high, but all samples are ND, therefore the results are reported.
The following sample is associated (LCS 885-30055/2-A).

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

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

Diesel Range Organics
Method 8015D_DRO: The continuing calibration verification (CCV) associated with batch 885-30397 recovered above the upper control limit for Di-n-octyl phthalate (Surr). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are:(CCV 885-30397/54) and (CCV 885-30397/63).

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.

Eurofins Albuquerque

Client Sample Results

Client: Vertex
Project/Site: Spud 16 State 10H

Job ID: 885-28666-1

Client Sample ID: Backfill

Lab Sample ID: 885-28666-1

Date Collected: 07/07/25 17:00

Matrix: Solid

Date Received: 07/12/25 08:15

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		07/14/25 11:23	07/16/25 00:08	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		15 - 150			07/14/25 11:23	07/16/25 00:08	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024	mg/Kg		07/14/25 11:23	07/16/25 00:08	1
Ethylbenzene	ND		0.048	mg/Kg		07/14/25 11:23	07/16/25 00:08	1
Toluene	ND		0.048	mg/Kg		07/14/25 11:23	07/16/25 00:08	1
Xylenes, Total	ND		0.097	mg/Kg		07/14/25 11:23	07/16/25 00:08	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		15 - 150			07/14/25 11:23	07/16/25 00:08	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		07/16/25 12:29	07/19/25 00:08	1
Motor Oil Range Organics [C28-C40]	ND		42	mg/Kg		07/16/25 12:29	07/19/25 00:08	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	112		62 - 134			07/16/25 12:29	07/19/25 00:08	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**15000**		150	mg/Kg		07/14/25 17:23	07/16/25 10:04	50

Eurofins Albuquerque

7/19/2025

QC Sample Results

Client: Vertex
Project/Site: Spud 16 State 10H

Job ID: 885-28666-1

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

Lab Sample ID: MB 885-30055/1-A
Matrix: Solid
Analysis Batch: 30187

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 30055

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	ND		5.0	mg/Kg		07/14/25 11:23	07/15/25 17:35	1

Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*103*		*15 - 150*			*07/14/25 11:23*	*07/15/25 17:35*	*1*

Lab Sample ID: LCS 885-30055/2-A
Matrix: Solid
Analysis Batch: 30187

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 30055

Analyte		Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
Gasoline Range Organics (GRO)-C6-C10		25.0	33.6	*+	mg/Kg		135	70 - 130	

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	*237*		*15 - 150*

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 885-30055/1-A
Matrix: Solid
Analysis Batch: 30186

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 30055

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025	mg/Kg		07/14/25 11:23	07/15/25 17:35	1
Ethylbenzene	ND		0.050	mg/Kg		07/14/25 11:23	07/15/25 17:35	1
Toluene	ND		0.050	mg/Kg		07/14/25 11:23	07/15/25 17:35	1
Xylenes, Total	ND		0.10	mg/Kg		07/14/25 11:23	07/15/25 17:35	1

Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*93*		*15 - 150*			*07/14/25 11:23*	*07/15/25 17:35*	*1*

Lab Sample ID: LCS 885-30055/3-A
Matrix: Solid
Analysis Batch: 30186

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 30055

Analyte		Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
Benzene		1.00	0.956		mg/Kg		96	70 - 130	
Ethylbenzene		1.00	0.958		mg/Kg		96	70 - 130	
m-Xylene & p-Xylene		2.00	1.95		mg/Kg		98	70 - 130	
o-Xylene		1.00	0.977		mg/Kg		98	70 - 130	
Toluene		1.00	0.930		mg/Kg		93	70 - 130	

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	*95*		*15 - 150*

Eurofins Albuquerque

QC Sample Results

Client: Vertex

Project/Site: Spud 16 State 10H

Job ID: 885-28666-1

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

Lab Sample ID: MB 885-30231/1-A

Client Sample ID: Method Blank

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 30397

Prep Batch: 30231

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10	mg/Kg		07/16/25 12:29	07/18/25 14:50	1
Motor Oil Range Organics [C28-C40]	ND		50	mg/Kg		07/16/25 12:29	07/18/25 14:50	1

Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	116		62 - 134			07/16/25 12:29	07/18/25 14:50	1

Lab Sample ID: LCS 885-30231/2-A

Client Sample ID: Lab Control Sample

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 30397

Prep Batch: 30231

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Diesel Range Organics [C10-C28]	50.0	44.3		mg/Kg		89	51 - 148

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Di-n-octyl phthalate (Surr)	91		62 - 134

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 885-30097/1-A

Client Sample ID: Method Blank

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 30137

Prep Batch: 30097

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.5	mg/Kg		07/14/25 17:23	07/15/25 12:43	1

Lab Sample ID: LCS 885-30097/2-A

Client Sample ID: Lab Control Sample

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 30137

Prep Batch: 30097

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	15.0	15.1		mg/Kg		100	90 - 110

Eurofins Albuquerque

QC Association Summary

Client: Vertex

Project/Site: Spud 16 State 10H

Job ID: 885-28666-1

GC VOA

Prep Batch: 30055

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-28666-1	Backfill	Total/NA	Solid	5030C	
MB 885-30055/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 885-30055/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCS 885-30055/3-A	Lab Control Sample	Total/NA	Solid	5030C	

Analysis Batch: 30186

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-28666-1	Backfill	Total/NA	Solid	8021B	30055
MB 885-30055/1-A	Method Blank	Total/NA	Solid	8021B	30055
LCS 885-30055/3-A	Lab Control Sample	Total/NA	Solid	8021B	30055

Analysis Batch: 30187

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-28666-1	Backfill	Total/NA	Solid	8015M/D	30055
MB 885-30055/1-A	Method Blank	Total/NA	Solid	8015M/D	30055
LCS 885-30055/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	30055

GC Semi VOA

Prep Batch: 30231

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-28666-1	Backfill	Total/NA	Solid	SHAKE	
MB 885-30231/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-30231/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	

Analysis Batch: 30397

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-28666-1	Backfill	Total/NA	Solid	8015M/D	30231
MB 885-30231/1-A	Method Blank	Total/NA	Solid	8015M/D	30231
LCS 885-30231/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	30231

HPLC/IC

Prep Batch: 30097

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-28666-1	Backfill	Total/NA	Solid	300_Prep	
MB 885-30097/1-A	Method Blank	Total/NA	Solid	300_Prep	
LCS 885-30097/2-A	Lab Control Sample	Total/NA	Solid	300_Prep	

Analysis Batch: 30137

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 885-30097/1-A	Method Blank	Total/NA	Solid	300.0	30097
LCS 885-30097/2-A	Lab Control Sample	Total/NA	Solid	300.0	30097

Analysis Batch: 30203

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-28666-1	Backfill	Total/NA	Solid	300.0	30097

Eurofins Albuquerque

Lab Chronicle

Client: Vertex

Job ID: 885-28666-1

Project/Site: Spud 16 State 10H

Client Sample ID: Backfill

Lab Sample ID: 885-28666-1

Date Collected: 07/07/25 17:00

Matrix: Solid

Date Received: 07/12/25 08:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			30055	AT	EET ALB	07/14/25 11:23
Total/NA	Analysis	8015M/D		1	30187	AT	EET ALB	07/16/25 00:08
Total/NA	Prep	5030C			30055	AT	EET ALB	07/14/25 11:23
Total/NA	Analysis	8021B		1	30186	AT	EET ALB	07/16/25 00:08
Total/NA	Prep	SHAKE			30231	JM	EET ALB	07/16/25 12:29
Total/NA	Analysis	8015M/D		1	30397	DH	EET ALB	07/19/25 00:08
Total/NA	Prep	300_Prep			30097	MA	EET ALB	07/14/25 17:23
Total/NA	Analysis	300.0		50	30203	RC	EET ALB	07/16/25 10:04

Laboratory References:

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

Eurofins Albuquerque

Accreditation/Certification Summary

Client: Vertex　　　　　　　　　　　　　　　　　　　　　　　　　　Job ID: 885-28666-1
Project/Site: Spud 16 State 10H

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	02-27-26

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

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	NM100001	02-26-26

Eurofins Albuquerque

7/19/2025

Chain-of-Custody Record

Client: Vertex resource Group
(bill to devon)

Mailing Address: 3101 Boyd dr.
Carlsbad NM, 88220

Phone #: 575-725-5001

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: Spud 16 State 10H

Project #: 23E-02857

Project Manager: SCarttar@vertex.Ca
Sally Carttar

Sampler: Katrina Taylor

On Ice: ☒ Yes   ☐ No   mg̀

# of Coolers: 1

Cooler Temp (including CF): 5.6+0.2-5.8   (°C)

HALL ENVIRONMENTAL ANALYSIS LABOR/
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 8710
885-28666 COC
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, NO3, NO2, PO4, SO4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)				
7/7	17:00	Soil	Backfill	4oz, 1	ICE		X	X					X								

Date	Time	Relinquished by	Received by	Via	Date	Time
7/11/25	800	Katrina Taylor	CCummings		7/11/25	800
7/11/25	1910	CCummings		caini	7/12/25	8:15

Remarks:
ATTN: Jim Raley (Jim.raley@DvN.com)
CC: SCarttar@vertex.Ca &
Katrina.Taylor@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: 885-28666-1

Login Number: 28666   **List Source: Eurofins Albuquerque**
List Number: 1
Creator: Casarrubias, Tracy

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
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	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Eurofins Albuquerque

Page 13 of 13   7/19/2025

APPENDIX C – Prior Variance Request

From:	[Chad Hensley](#)
To:	[Riley Plogger](#)
Subject:	FW: NMOCD Spud 16 10 & 11H and Laguna Salado 22 Federal 4 & 5 meeting overview
Date:	Wednesday, November 20, 2024 10:01:00 AM

For your correspondence in the closure report

From: Chad Hensley
Sent: Friday, November 8, 2024 9:17 AM
To: Hamlet, Robert, EMNRD <Robert.Hamlet@emnrd.nm.gov>; scott.rodgers@emnrd.nm.gov
Cc: Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Raley, Jim <Jim.Raley@dvn.com>
Subject: FW: NMOCD Spud 16 10 & 11H and Laguna Salado 22 Federal 4 & 5 meeting overview

Good afternoon here is a brief overview what was discussed in the meeting 11/4/20024

Spud 16 10H Battery

Incident # nAPP2317939002

Confirmation sampling event with the variance of 10,000 chlorides. 1 sample BS24-45 needs to be resampled that has a chloride of 11,000

Spud 16 11H

Incident # nAPP2427745812

Confirmation sampling event was good with the variance of 10,000 chlorides to send closure report to OCD

Spud 16 10H

Incident # nAB1810133480

Confirmation sampling with the variance of 15,000 met criteria. Closure report needs to be sent to OCD

Laguna Salado 22 Federal 4H

Incident # NAB1627737279

2 background samples need to be taken North of release closer to spill area and North in vegetation . 1 Background sample to be collected East of pipeline and 1 South end of spill area. With a total of 4 backgrounds

Laguna Salado 22 Federal 5H:

Incident #: NAB1914043668

Proposed release area needs to be sampled along road and East of road near salt lake

for hydrocarbons

Riley Plogger
Eviromental Technician

Vertex Resource Services Inc.
3101 Boyd Drive
Carlsbad, NM 88220

C. 575-361-9639

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

QUESTIONS

Action 536158

QUESTIONS

Operator:	OGRID:
DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	6137
	Action Number: 536158
	Action Type: [C-141] Revegetation Report C-141 (C-141-v-Revegetation)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAB1810133480**
Incident Name	**NAB1810133480 SPUD 16 STATE 10H @ 30-015-41148**
Incident Type	**Produced Water Release**
Incident Status	**Re-vegetation Report Received**
Incident Well	**[30-015-41148] SPUD 16 STATE #010H**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	SPUD 16 STATE 10H
Date Release Discovered	03/19/2018
Surface Owner	Private

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: Equipment Failure	Flow Line - Production	Produced Water	Released: 47 BBL	Recovered: 0 BBL Lost: 47 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.*

QUESTIONS, Page 2

Action 536158

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

QUESTIONS (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 536158
	Action Type: [C-141] Revegetation Report C-141 (C-141-v-Revegetation)

QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	**No, according to supplied volumes this does not appear to be a "gas only" report.**
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	**Yes**
Reasons why this would be considered a submission for a notification of a major release	**From paragraph A. "Major release" determine using:** **(1) an unauthorized release of a volume, excluding gases, of 25 barrels or more.**

With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.

Initial Response	
The responsible party must undertake the following actions immediately unless they could create a 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: James Raley Title: EHS Professional Email: jim.raley@dvn.com Date: 12/18/2025

QUESTIONS, Page 3

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

Action 536158

QUESTIONS (continued)

Operator:	OGRID:
DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	6137
	Action Number: 536158
	Action Type: [C-141] Revegetation Report C-141 (C-141-v-Revegetation)

QUESTIONS

Site Characterization

Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 26 and 50 (ft.)
What method was used to determine the depth to ground water	NM OSE iWaters Database Search
Did this release impact groundwater or surface water	No

What is the minimum distance, between the closest lateral extents of the release and the following surface areas:

A continuously flowing watercourse or any other significant watercourse	Between 1 and 5 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between 100 and 200 (ft.)
An occupied permanent residence, school, hospital, institution, or church	Between 1 and 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between ½ and 1 (mi.)
Any other fresh water well or spring	Between 500 and 1000 (ft.)
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	Greater than 5 (mi.)
An (non-karst) unstable area	Between ½ and 1 (mi.)
Categorize the risk of this well / site being in a karst geology	Medium
A 100-year floodplain	Zero feet, overlying, or within area
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)	21000
TPH (GRO+DRO+MRO)	(EPA SW-846 Method 8015M)	6300
GRO+DRO	(EPA SW-846 Method 8015M)	2900
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	09/11/2024
On what date will (or did) the final sampling or liner inspection occur	10/11/2024
On what date will (or was) the remediation complete(d)	09/24/2024
What is the estimated surface area (in square feet) that will be reclaimed	3422
What is the estimated volume (in cubic yards) that will be reclaimed	128
What is the estimated surface area (in square feet) that will be remediated	0
What is the estimated volume (in cubic yards) that will be remediated	0

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.

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

QUESTIONS (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 536158
	Action Type: [C-141] Revegetation Report C-141 (C-141-v-Revegetation)

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	fEEM0112334510 HALFWAY DISPOSAL AND LANDFILL
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: James Raley Title: EHS Professional Email: jim.raley@dvn.com Date: 12/18/2025

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

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Energy, Minerals and Natural Resources
Oil Conservation Division
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Action 536158

QUESTIONS (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 536158
	Action Type: [C-141] Revegetation Report C-141 (C-141-v-Revegetation)

QUESTIONS

Deferral Requests Only	
Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.	
Requesting a deferral of the remediation closure due date with the approval of this submission	No

State of New Mexico
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Action 536158

QUESTIONS (continued)

Operator:	OGRID:
DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	6137
	Action Number: 536158
	Action Type: [C-141] Revegetation Report C-141 (C-141-v-Revegetation)

QUESTIONS

Sampling Event Information

Last sampling notification (C-141N) recorded	**390561**
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	**10/11/2024**
What was the (estimated) number of samples that were to be gathered	**5**
What was the sampling surface area in square feet	**1000**

Remediation Closure Request

Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.

Requesting a remediation closure approval with this submission	Yes
Have the lateral and vertical extents of contamination been fully delineated	**Yes**
Was this release entirely contained within a lined containment area	**No**
All areas reasonably needed for production or subsequent drilling operations have been stabilized, returned to the sites existing grade, and have a soil cover that prevents ponding of water, minimizing dust and erosion	Yes
What was the total surface area (in square feet) remediated	0
What was the total volume (cubic yards) remediated	0
All areas not reasonably needed for production or subsequent drilling operations have been reclaimed to contain a minimum of four feet of non-waste contain earthen material with concentrations less than 600 mg/kg chlorides, 100 mg/kg TPH, 50 mg/kg BTEX, and 10 mg/kg Benzene	Yes
What was the total surface area (in square feet) reclaimed	3422
What was the total volume (in cubic yards) reclaimed	128
Summarize any additional remediation activities not included by answers (above)	Area meets cleanup standards.

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

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

I hereby agree and sign off to the above statement	Name: James Raley Title: EHS Professional Email: jim.raley@dvn.com Date: 12/18/2025

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Action 536158

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

QUESTIONS (continued)

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 536158
	Action Type: [C-141] Revegetation Report C-141 (C-141-v-Revegetation)

QUESTIONS

Reclamation Report	
Only answer the questions in this group if all reclamation steps have been completed.	
Requesting a reclamation approval with this submission	Yes
What was the total reclamation surface area (in square feet) for this site	3422
What was the total volume of replacement material (in cubic yards) for this site	122
Per Paragraph (1) of Subsection D of 19.15.29.13 NMAC the reclamation must contain a minimum of four feet of non-waste containing, uncontaminated, earthen material with chloride concentrations less than 600 mg/kg as analyzed by EPA Method 300.0, or other test methods approved by the division. The soil cover must include a top layer, which is either the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater.	
Is the soil top layer complete and is it suitable material to establish vegetation	Yes
On what (estimated) date will (or was) the reseeding commence(d)	04/24/2025
Summarize any additional reclamation activities not included by answers (above)	Detailed in report
The responsible party must attach information demonstrating they have complied with all applicable reclamation requirements and any conditions or directives of the OCD. This demonstration should be in the form of attachments (in .pdf format) including a scaled site map, any proposed reseeding plans or relevant field notes, photographs of reclaimed area, and a narrative of the reclamation activities. Refer to 19.15.29.13 NMAC.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.	
I hereby agree and sign off to the above statement	Name: James Raley Title: EHS Professional Email: jim.raley@dvn.com Date: 12/18/2025

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
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Action 536158

QUESTIONS (continued)

Operator:	OGRID:
DEVON ENERGY PRODUCTION COMPANY, LP	6137
333 West Sheridan Ave.	**Action Number:**
Oklahoma City, OK 73102	536158
	Action Type:
	[C-141] Revegetation Report C-141 (C-141-v-Revegetation)

QUESTIONS

Revegetation Report

Only answer the questions in this group if all surface restoration, reclamation and re-vegetation obligations have been satisfied.

Requesting a restoration complete approval with this submission	Yes
What was the total revegetation surface area (in square feet) for this site	3422

Per Paragraph (2) of Subsection D of 19.15.29.13 NMAC the responsible party must reseed disturbed area in the first favorable growing season following closure of the site.

On what date did the reseeding commence	04/24/2025
On what date was the vegetative cover inspected	07/08/2025
What was the life form ratio compared to pre-disturbance levels	70
What was the total percent plant cover compared to pre-disturbance levels	70
Summarize any additional revegetation activities not included by answers (above)	Detailed in report.

The responsible party must attach information demonstrating they have complied with all applicable re-vegetation requirements and any conditions or directives of the OCD. This demonstration should be in the form of attachments (in .pdf format) including a scaled site map, any life form ratio and percent plant cover sampling diagrams or other relevant field notes, photographs of re-vegetated areas, and a narrative of the re-vegetation activities. Refer to 19.15.29.13 NMAC.

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

I hereby agree and sign off to the above statement	Name: James Raley Title: EHS Professional Email: jim.raley@dvn.com Date: 12/18/2025

Per Paragraph (4) of Subsection (D) of 19.15.29.13 NMAC for any major or minor release containing liquids, the responsible party must notify the division when reclamation and re-vegetation are complete.

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CONDITIONS

Action 536158

CONDITIONS

Operator:	OGRID:
DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	6137

	Action Number: 536158
	Action Type: [C-141] Revegetation Report C-141 (C-141-v-Revegetation)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	We have received your Reclamation Re-vegetation Report for Incident #NAB1810133480 SPUD 16 STATE 10H, thank you. This Reclamation Re-vegetation Report is approved.	2/13/2026