

Incident ID	nAPP22116441032
District RP	
Facility ID	
Application ID	

Closure

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

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

- ☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☒ Description of remediation activities

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

Printed Name: Dale Woodall Title: Environment Professional

Signature: Dale Woodall Date: 10/19/2022

email: dale.wodall@dv.com Telephone: 575-7481838

OCD Only

Received by: Robert Hamlet Date: 11/22/2022

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: Robert Hamlet Date: 11/22/2022

Printed Name: Robert Hamlet Title: Environmental Specialist - Advanced

Incident ID	nAPP22116441032
District RP	
Facility ID	
Application ID	

Closure

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

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

- ☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☒ Description of remediation activities

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

Printed Name: Dale Woodall Title: Environment Professional

Signature: Dale Woodall Date: 10/19/2022

email: dale.wodall@dmn.com Telephone: 575-7481838

OCD Only

Received by: Date:

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: Date:

Printed Name: Title:



September 26, 2022,

Vertex Project #: 22E-01720

Spill Closure Report: Onyx 29 CTB 1
Unit E, Section 29, Township 19 South, Range 29 East
API: N/A
County: Eddy
Incident ID: nAPP2213024415, nAPP2116441032

Prepared For: **Devon Energy Production Company**
6488 Seven Rivers Highway
Artesia, New Mexico 88210

New Mexico Oil Conservation Division - District 2 - Artesia

811 S. 1st Street
Artesia, New Mexico 88210

Devon Energy Production Company (Devon) retained Vertex Resource Services Inc. (Vertex) to conduct a Spill Assessment and Closure for multiple produced water releases at Onyx 29 CTB 1 (hereafter referred to as "Onyx"). Devon submitted an initial C-141 Release Notification (Attachment 1) for both releases to the New Mexico Oil Conservation Division (NMOCD) District 2 on June 30, 2021, and June 2, 2022. Incident ID numbers nAPP2213024415 and nAPP2116441032 were assigned to the incidents.

This letter provides a description of each release assessment and remediation activities that demonstrates that closure criteria established in Table I of 19.15.29.12 *New Mexico Administrative Code* (NMAC; New Mexico Oil Conservation Division, 2018) are being met and all applicable regulations are being followed. This document is intended to serve as a final report to obtain approval from NMOCD for the closure of these releases. This is with the understanding that restoration of the release sites will be deferred until such time as all oil and gas activities are terminated and the site is reclaimed per 19.15.29.13 of NMAC.

Incident Descriptions

nAPP2113024415

The release for nAPP2113024415 occurred on the south side of the location when a recirculating line on the oil tanks developed a leak. The fluid traveled southeast and southwest of the oil tanks and stopped on the pad. The horizontal extent of the release was approximately 300 feet long. 28.3 barrels of oil and produced water were released. After the release, a hydrovac was brought on-site to recover the fluids. Approximately eight barrels of the fluids were recovered. No oil or produced water was released into waterways.

nAPP2116441032

The release for nAPP2116441032 occurred on the north side of Onyx when a water line near the heater treaters developed a leak. The fluid traveled west approximately 125 feet and stopped at the middle of the pad. The leak resulted in the release of nine and a half barrels of produced water. After the release, a hydrovac was brought on-site to recover

vertex.ca

3101 Boyd Drive, Carlsbad, New Mexico 88220, USA | P 575.725.5001

the fluids. Approximately one barrel of the fluids was recovered. No produced water was released into waterways.

Site Characterization

The releases at Devon's Onyx site occurred on state land at 32.634740° N, 104.102030° W, approximately 16.4 miles northeast of Carlsbad, New Mexico. The legal description for the site is Unit E, Section 29, Township 19 South, Range 29 East in Eddy County, New Mexico. This location is within the Permian Basin in southeast New Mexico and has historically been used for oil and gas exploration and production, and rangeland.

Onyx is typical of oil and gas exploration and production sites on the western portion of the Permian Basin and is currently used for oil and gas production and storage. The following sections specifically describe the release areas on the east side of the constructed pad where the heater treaters and separators are located (Attachment 2).

The nearest active well to Onyx is a New Mexico Office of the State Engineer (NMOSE) monitoring well located approximately 1.62 miles southwest of the site (United States Department of the Interior, United States Geological Survey, 2021). Data from 2013 shows the NMOSE well had a depth to groundwater of 75 feet below the ground surface (bgs). Information pertaining to the depth to groundwater determination is included in Attachment 3.

The surrounding landscape is associated with ridges, plains, and hills with elevations ranging between 1,250 and 5,000 feet. The climate is semiarid with average annual precipitation ranging between 10 and 25 inches. Using information from the United States Department of Agriculture, the dominant vegetation was determined to be tobosa, black grama, and blue grama. Grasses with shrubs and half-shrubs dominate the historic plant community (United States Department of Agriculture, Natural Resources Conservation Service, 2021). Limited to no vegetation is allowed to grow on the compacted production pad, right of way, and access road.

The Geological Map of New Mexico indicates the surface geology at Onyx is comprised primarily of Qp – Piedmont alluvial deposits from the Holocene to lower Pleistocene ages (The New Mexico Bureau of Geology and Mineral Resources, 2022). The United States Department of Agriculture Web Soil Survey characterizes the soil at the site as Reeves and Gypsum Land Complex. The soil is well-drained with a high runoff. The karst geology potential for Onyx is high (United States Department of the Interior, Bureau of Land Management, 2022).

There is no surface water located at Onyx. The nearest significant watercourse, as defined in Subsection P of 19.15.17.7 NMAC, is the Pecos River located approximately 12.9 miles west of the site. At Onyx, there are no continuously flowing watercourses or significant watercourses, lakebeds, sinkholes, playa lakes or other critical water or community features as outlined in Paragraph (4) of Subsection C of 19.15.29.12 NMAC.

Closure Criteria Determination

Using site characterization information, a closure criteria determination worksheet (Attachment 3) was completed to determine if the release was subject to any of the special case scenarios outlined in Paragraph (4) of Subsection C of 19.15.29.12 NMAC.

Based on the data included in the closure criteria determination worksheet, the releases at Onyx are subject to the

requirements of Paragraph (4) of Subsection C of 19.15.29.12 NMAC. The release areas are within a high potential for karst geology; therefore, the closure criteria for the incident will assume NMOCD's strictest criteria and are determined to be associated with the following constituent concentration limits.

Table 1. Closure Criteria for Soils Impacted by a Release		
Minimum depth below any point within the horizontal boundary of the release to groundwater less than 10,000 mg/l TDS	Constituent	Limit
< 50 Feet	Chloride	600 mg/kg
	TPH (GRO+DRO+MRO)	100 mg/kg
	BTEX	50 mg/kg
	Benzene	10 mg/kg

Remedial Actions

On May 23, 2022, Devon contracted Vertex to complete release delineation and remediation at Onyx through field screening procedures, oversight of the remediation fieldwork, and final confirmatory sampling. The initial spill inspection and site characterization activities at Onyx were completed by Vertex between May 23 and May 25, 2022. The Daily Field Reports and Daily Soil Sampling Reports associated with the visits are included in Attachment 4. The extent of the south release near the separators and oil tanks (nAPP2116441032) was determined to be approximately 9,705 square feet. The extent of the north release near the heater treaters (nAPP2213024415) was determined to be approximately 1,775 square feet. Initial characterization sample locations for both releases are presented in Figure 1 and Figure 4 (Attachment 2) and laboratory results are presented in Table 1 and Table 4 (Attachment 6).

During excavation and following the completion of excavation activities from August 4 to August 31, 2022, Vertex provided three 48-hour notifications of continuous confirmation sampling to NMOCD (Attachment 5), as required by Subparagraph (a) of Paragraph (1) of Subsection D 19.15.29.12 NMAC. The releases were remediated horizontally and vertically with a Vertex representative on-site to conduct field screening procedures. The final square footage for the south excavation was 9,222 square feet. The final square footage for the north release near the heater treaters was 4,224 square feet. On August 31, 2022, excavation was completed with approximately 3,520 total cubic yards excavated and hauled to R360.

On August 9 through August 26, 2022, Vertex collected a total of 65 five-point composite confirmatory samples from the base and the sidewalls of the south excavation, at depths ranging between 1 and 8 feet bgs. On August 29 through August 31, 2022, Vertex collected a total of 33 five-point composite confirmatory samples from the base and sidewalls of the north excavation, at depths ranging between 1 and 4 feet bgs. Each composite sample was representative of no more than 200 square feet per the alternate sampling method outlined in Subparagraph (c) of Paragraph (1) of Subsection D 19.15.29.12 NMAC, which does not require prior NMOCD approval. The composite samples were placed into laboratory-provided containers, preserved on ice, and submitted to a National Environmental Laboratory Accreditation Program-approved laboratory for chemical analysis. Confirmation sample locations for both releases are presented in Figure 2 and Figure 5 (Attachment 2) and laboratory results are presented in Table 3 and Table 6 (Attachment 6).

Devon Energy Production Company
Onyx 29 CTB 1, nAPP2213024415, nAPP2116441032

2022 Spill Assessment and Closure
September 2022

Laboratory analyses included Method 300.0 for chlorides, Method 8021B for volatile organics, including BTEX, and EPA Method 8015 for TPH, including MRO, DRO, and GRO. Confirmatory sample analytical data are summarized in Attachment 6. Laboratory data reports and chain of custody forms are included in Attachment 7.

A GeoExplorer 7000 Series Trimble global positioning system unit was used to map the approximate center of each of the five-point composite samples.

On September 7, 2022, backfill was completed for both releases. Approximately 3,520 cubic yards of clean, uncontaminated soil were obtained from Devon and the landowner for this purpose.

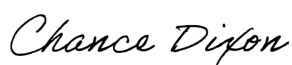
Closure Request

Vertex recommends no additional remediation action to address the releases at Onyx. Laboratory analyses of confirmatory samples collected at Onyx show final values below NMOCD closure criteria for areas where depth to groundwater is less than 50 feet bgs as presented in Table 1. There are no anticipated risks to human, ecological or hydrological receptors at the release site.

The excavation was backfilled with non-waste-containing, uncontaminated, earthen material, sourced locally, and placed to meet the site's existing grade to prevent water ponding and erosion.

Vertex requests that these incidents (nAPP2213024415 and nAPP2116441032) be closed as all closure requirements set forth in Subsection E of 19.15.29.12 NMAC have been met. Devon certifies that all information in this report and the attachments are correct and that they have complied with all applicable closure requirements and conditions specified in division rules and directives to meet NMOCD requirements to obtain closure on the releases at Onyx.

Should you have any questions or concerns, please do not hesitate to contact Kent Stallings at 346.814.1413 or KStallings@vertex.ca.



9/26/2022

Chance Dixon, B.Sc.
SR. ENVIRONMENTAL TECHNICIAN, REPORTING

Date



9/26/2022

Kent Stallings, P.G.
PROJECT MANAGER, REPORT REVIEW

Date

vertex.ca

3101 Boyd Drive, Carlsbad, New Mexico 88220, USA | P 575.725.5001

Devon Energy Production Company
Onyx 29 CTB 1, nAPP2213024415, nAPP2116441032

2022 Spill Assessment and Closure
September 2022

Attachments

- Attachment 1. NMOCD C-141 Reports
- Attachment 2. Figures
- Attachment 3. Closure Criteria for Soils Impacted by a Release Research Determination Documentation
- Attachment 4. Daily Field Reports with Photographs and Daily Soil Sampling Reports
- Attachment 5. Required 48-Hour Notification of Confirmatory Sampling to Regulatory Agencies
- Attachment 6. Summarized Lab Data Tables
- Attachment 7. Laboratory Data Reports and Chain of Custody Forms

References

- Google Inc. (2022). *Google Earth Pro (Version 7.3.3)* [Software]. Retrieved from <https://earth.google.com>
- New Mexico Bureau of Geology and Mineral Resources. (2019). *Interactive Geologic Map*. Retrieved from <http://geoinfo.nmt.edu>
- New Mexico Office of the State Engineer, New Mexico Water Rights Reporting System. (2019). *Well Log/Meter Information Report*. Retrieved from <http://nmwrrs.ose.state.nm.us/nmwrrs/meterReport.html>
- New Mexico Water Rights Reporting System. (2019a). *Water Column/Average Depth to Water Report*. Retrieved from <http://nmwrrs.ose.state.nm.us/nmwrrs/waterColumn.html>
- New Mexico Water Rights Reporting System. (2019b). *Point of Diversion Location Report*. Retrieved from <http://nmwrrs.ose.state.nm.us/nmwrrs/wellSurfaceDiversion.html>
- United States Department of Agriculture, Soil Conservation Service in Cooperation with New Mexico Agricultural Experiment Station. (1971). *Soil Survey, New Mexico*. Retrieved from http://www.wipp.energy.gov/library/Information_Repository_A/Supplemental_Information/Chugg%20et%20al%201971%20w-map.pdf
- United States Department of Homeland Security, FEMA Flood Map Service Center. (2010). *Flood Map Number 35015C1875D*. Retrieved from <https://msc.fema.gov/portal/search?AddressQuery=malaga%20new%20mexico#searchresultsanchor>
- United States Department of the Interior, Bureau of Land Management. (2019) *New Mexico Cave/Karsts*. Retrieved from <https://www.blm.gov/programs/recreation/recreation-programs/caves/new-mexico>
- United State Fish and Wildlife Service. (2019). *National Wetland Inventory Surface Waters and Wetland*. Retrieved from <https://www.fws.gov/wetlands/data/mapper.html>

Devon Energy Production Company
Onyx 29 CTB 1, nAPP2213024415, nAPP2116441032

2022 Spill Assessment and Closure
September 2022

Limitations

This report has been prepared for the sole benefit of Devon Energy Production Company. 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. 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 professionals 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 judgment of Vertex based on the data collected during the assessment. Due to the nature of the assessment and the data available, Vertex cannot warrant undiscovered environmental liabilities. Conclusions and recommendations presented in this report should not be considered legal advice.

ATTACHMENT 1

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

State of New Mexico
Energy Minerals and Natural
Resources Department

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

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

Incident ID	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party	OGRID
Contact Name	Contact Telephone
Contact email	Incident # (assigned by OCD)
Contact mailing address	

Location of Release Source

Latitude _____ Longitude _____
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Site Type
Date Release Discovered	API# (if applicable)

Unit Letter	Section	Township	Range	County

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

Nature and Volume of Release

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

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

Incident ID	
District RP	
Facility ID	
Application ID	

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

Initial Response

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

<input type="checkbox"/> The source of the release has been stopped.	
<input type="checkbox"/> The impacted area has been secured to protect human health and the environment.	
<input type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.	
<input type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why:	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name: _____	Title: _____
Signature: <u>Kendra Ruiz</u>	Date: _____
email: _____	Telephone: _____
<u>OCD Only</u>	
Received by: _____	Date: _____

Spill Volume(Bbls) Calculator	
<i>Inputs in blue, Outputs in red</i>	
Contaminated Soil measurement	
Area (square feet)	Depth(inches)
<u>1973.568</u>	<u>0.500</u>
Cubic Feet of Soil Impacted	<u>82.232</u>
Barrels of Soil Impacted	<u>14.66</u>
Soil Type	Clay/Sand
Barrels of Oil Assuming 100% Saturation	<u>2.20</u>
Saturation	Fluid present with shovel/backhoe
Estimated Barrels of Oil Released	<u>2.20</u>
Free Standing Fluid Only	
Area (square feet)	Depth(inches)
<u>1973.568</u>	<u>0.250</u>
Standing fluid	<u>7.329</u>
Total fluids spilled	<u>9.528</u>

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

State of New Mexico
Energy Minerals and Natural
Resources Department

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

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

Incident ID	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party	OGRID
Contact Name	Contact Telephone
Contact email	Incident # (assigned by OCD)
Contact mailing address	

Location of Release Source

Latitude _____ Longitude _____
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Site Type
Date Release Discovered	API# (if applicable)

Unit Letter	Section	Township	Range	County

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

Nature and Volume of Release

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

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)
Cause of Release		

Incident ID	
District RP	
Facility ID	
Application ID	

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

Initial Response

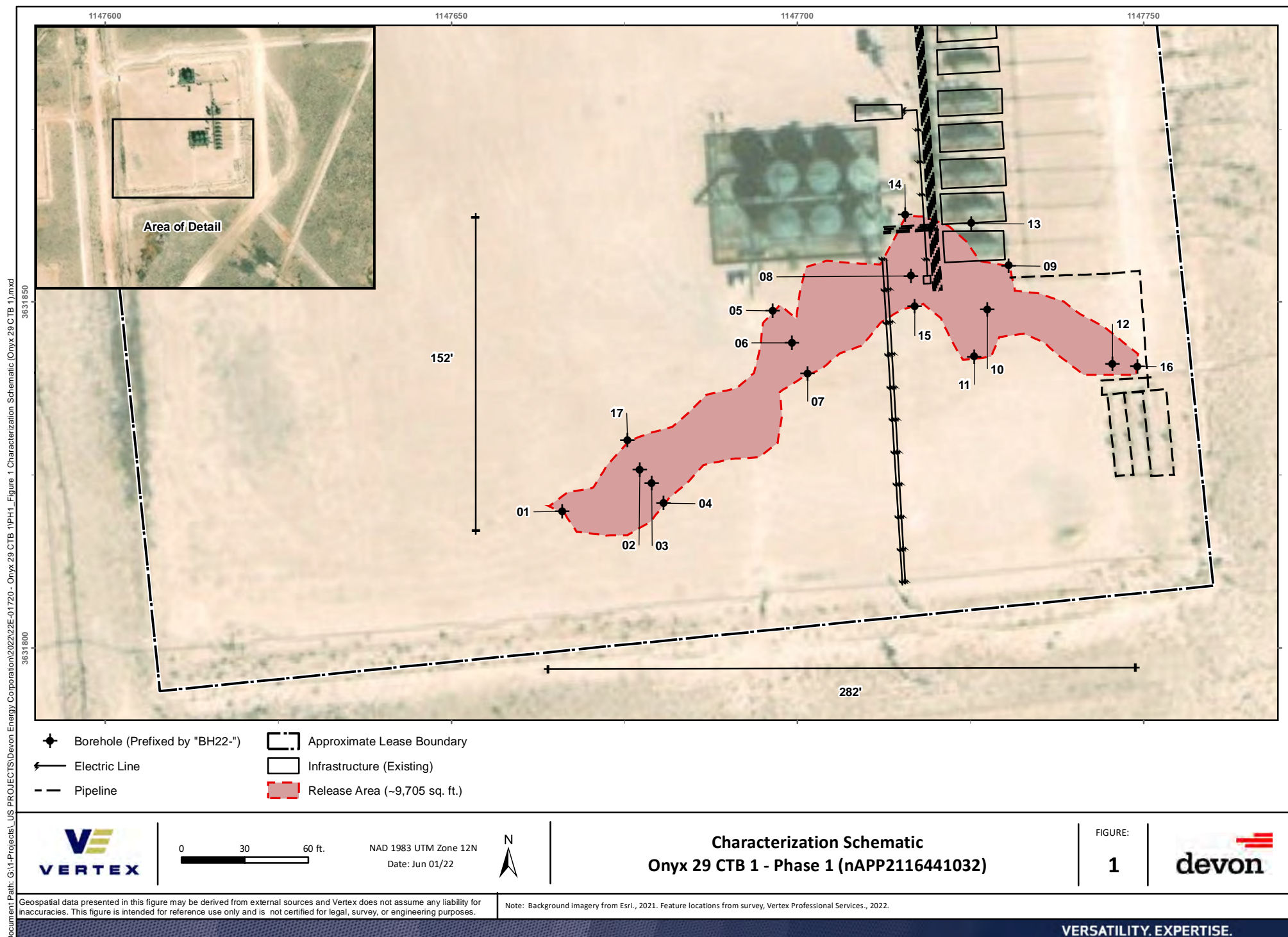
The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

<input type="checkbox"/> The source of the release has been stopped.	
<input type="checkbox"/> The impacted area has been secured to protect human health and the environment.	
<input type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.	
<input type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why:	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name: _____	Title: _____
Signature: <u>Kendra DeHoyos</u>	Date: _____
email: _____	Telephone: _____
<u>OCD Only</u>	
Received by: <u>Ramona Marcus</u>	Date: <u>7/6/2021</u>

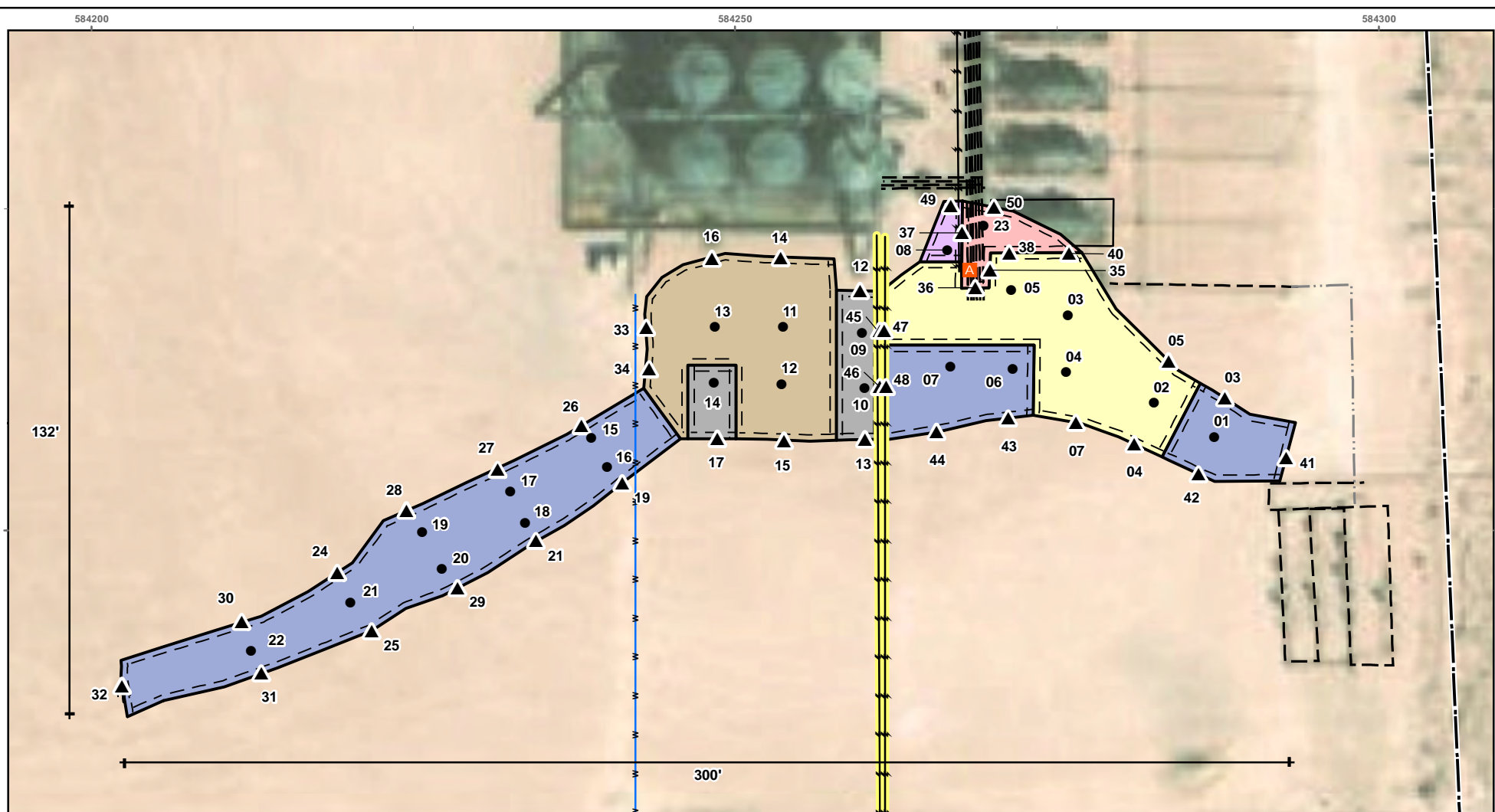
NAPP2116441032

Spill Volume(Bbls) Calculator	
<i>Inputs in blue, Outputs in red</i>	
Contaminated Soil measurement	
Area (square feet)	Depth(inches)
<u>9167</u>	<u>0.250</u>
Cubic Feet of Soil Impacted	<u>190.979</u>
Barrels of Soil Impacted	<u>34.04</u>
Soil Type	Clay/Sand
Barrels of Oil Assuming 100% Saturation	<u>5.11</u>
Saturation	Fluid present with shovel/backhoe
Estimated Barrels of Oil Released	5.11
Free Standing Fluid Only	
Area (square feet)	Depth(inches)
<u>6271.836</u>	<u>0.250</u>
Standing fluid	<u>23.291</u>
<u>Total fluids spilled</u>	<u>28.398</u>

ATTACHMENT 2



Document Path: G:\Projects\US PROJECTS\Devon Energy Corporation\2022\22E-01720 - Onyx 29 CTB 1\PH1_Figure 2 Confirmation Schematic Onyx 29 CTB 1 (nAPP2116441032).mxd



- | | | | |
|-----------------------------------|-----------------------------|----------------------------------|----------------------------------|
| Automation Box | Electric Line (Aboveground) | Approximate Lease Boundary | Excavation to 5' (2,098 sq. ft.) |
| Base Sample (Prefixed by "BS22-") | Electric Line (Underground) | Excavation to 1' (325 sp. ft.) | Excavation to 6' (1,920 sq. ft.) |
| Wall Sample (Prefixed by "WS22-") | Pipeline (Aboveground) | Excavation to 2' (118 sq. ft.) | Excavation to 8' (650 sq. ft.) |
| 6" Water Line | Pipeline (Underground) | Excavation to 4' (4,111 sq. ft.) | Separator |



0 12.5 25 50 ft.
Map Center:
Lat/Long: 32.634351, -104.101807

NAD 1983 UTM Zone 13N
Date: Sep 09/22



Confirmation Schematic Onyx 29 CTB 1 - Phase 1 (nAPP2116441032)

FIGURE:

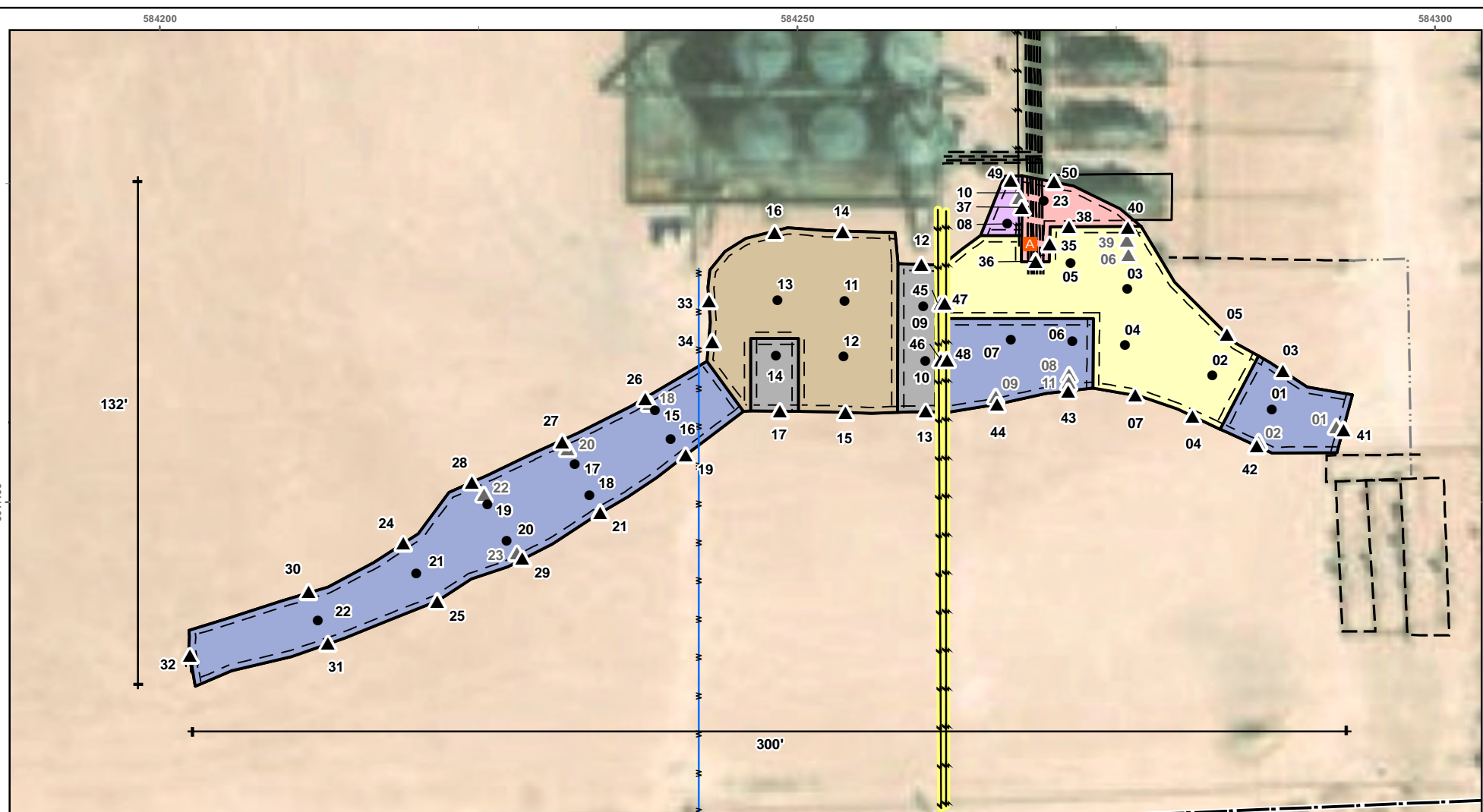
2



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: Background imagery from Esri., 2021. Feature locations from survey, Vertex Professional Services., 2022.

VERSATILITY. EXPERTISE.

Document Path: G:\Projects\US PROJECTS\Devon Energy Corporation\2022\22E-01720 - Onyx 29 CTB 1\PH1_Figure 3 Excavation Schematic Onyx 29 CTB 1 (nAPP2116441032).mxd
 3611100


- | | | | | |
|-----------------------------------|-----------------------------|--------------------------------|----------------------------------|-----------|
| Automation Box | 6" Water Line | Pipeline (Underground) | Excavation to 4' (4,111 sq. ft.) | Separator |
| Base Sample (Prefixed by "BS22-") | Electric Line (Aboveground) | Approximate Lease Boundary | Excavation to 5' (2,098 sq. ft.) | |
| Wall Sample (Excavated) | Electric Line (Underground) | Excavation to 1' (325 sq. ft.) | Excavation to 6' (1,920 sq. ft.) | |
| Wall Sample (Prefixed by "WS22-") | Pipeline (Aboveground) | Excavation to 2' (118 sq. ft.) | Excavation to 8' (650 sq. ft.) | |



0 12.5 25 50 ft.
 Map Center:
 Lat/Long: 32.634332, -104.101864

NAD 1983 UTM Zone 13N
 Date: Sep 09/22



Excavation Schematic Onyx 29 CTB 1 - Phase 1 (nAPP2116441032)

FIGURE:

3

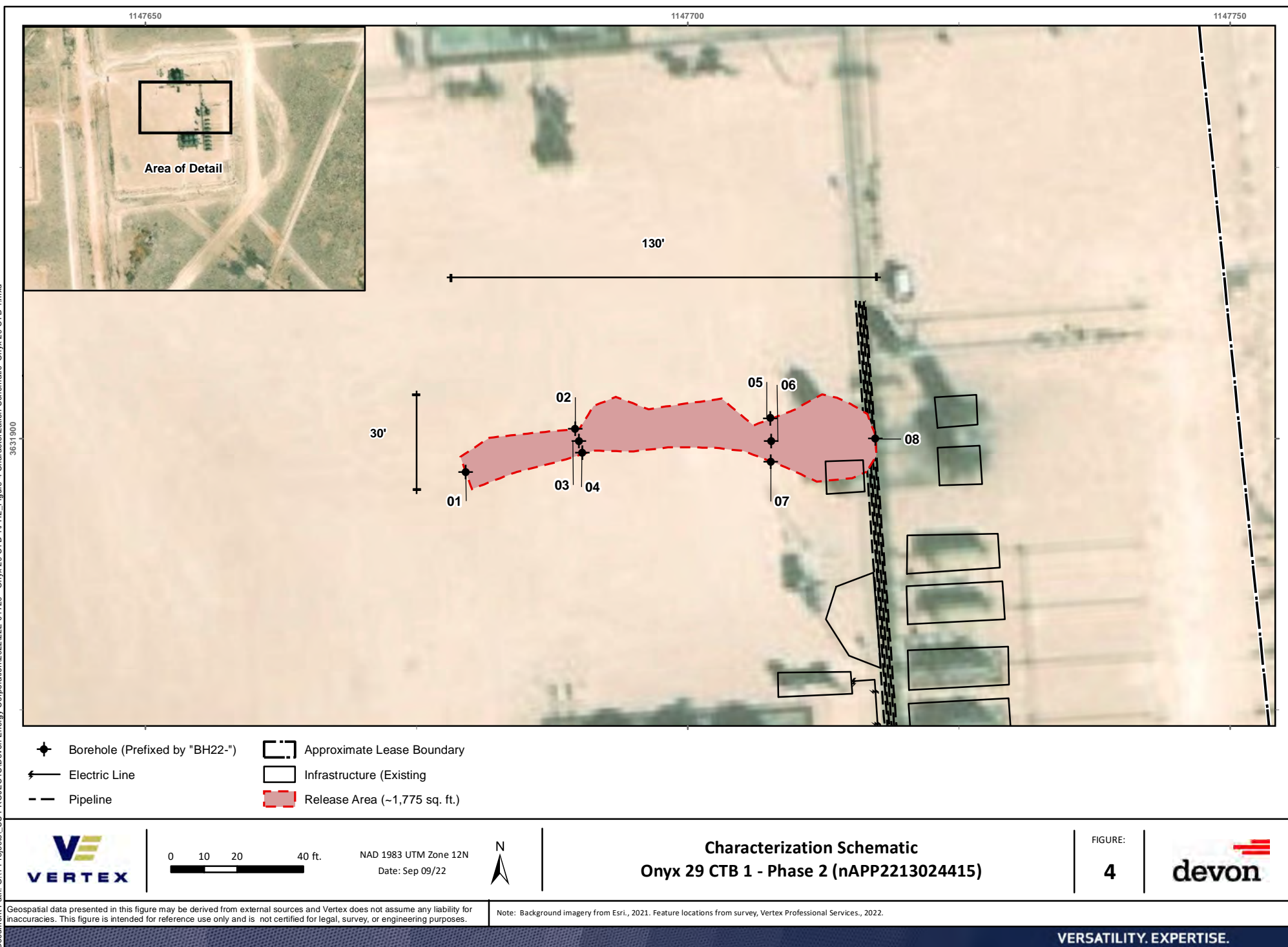


Geospatial data presented in this figure may be derived from external sources and Vertex does not assume any liability for inaccuracies. This figure is intended for reference use only and is not certified for legal, survey, or engineering purposes.

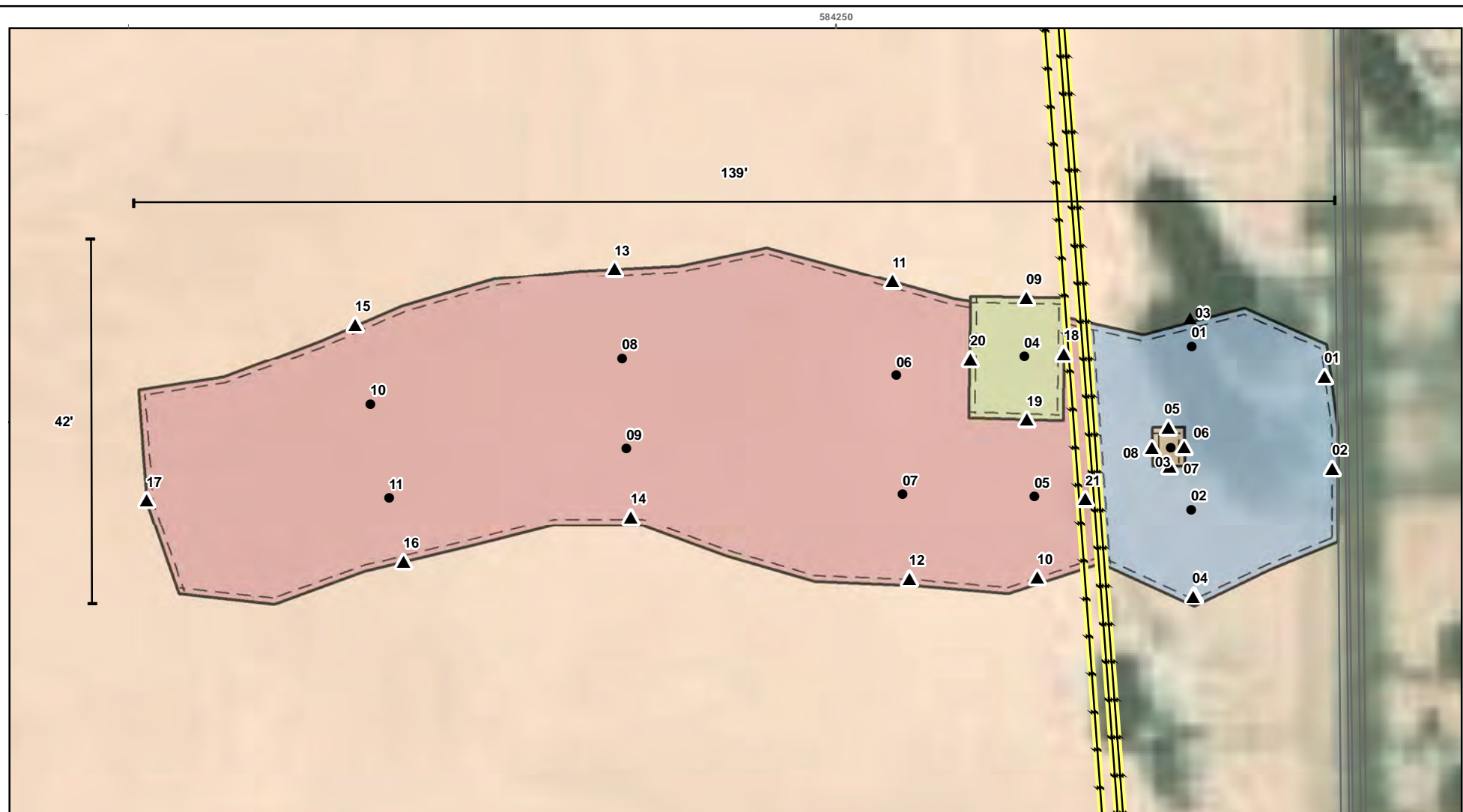
Note: Background imagery from Esri., 2021. Feature locations from survey, Vertex Professional Services., 2022.

VERSATILITY. EXPERTISE.

Document Path: G:\Projects\US PROJECTS\Devon Energy Corporation\2022\22E-01720 - Onyx 29 CTB 1\PH2_Figure 4 Characterization Schematic Onyx 29 CTB 1.mxd



Document Path: G:\Projects\US PROJECTS\Devon Energy Corporation\2022\2E-01720 - Onyx 29 CTB 1\PH2 Figure 5 Confirmation Schematic Onyx 29 CTB 1 (nAPP2213024415).mxd



- Base Sample (Prefixed by "BES22-") — Steel Lines (Aboveground) Excavation to 1' (~813 sq. ft.) Excavation to 4' (~17 sq. ft.)
- ▲ Wall Sample (Prefixed by "WES22-") ⚡ Electric Line (Underground) Excavation to 2' (~3,395 sq. ft.) Excavation to 4' (~155 sq. ft.)



0 5 10 20 ft.
Map Center:
Lat/Long: 32.634854, -104.101853

NAD 1983 UTM Zone 13N
Date: Sep 09/22



Confirmation Schematic Onyx 29 CTB 1 - Phase 2 (nAPP2213024415)

FIGURE:

5



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: Background imagery from Maxar, 2021. Feature locations from survey, Vertex Professional Services Ltd., 2022.

VERSATILITY. EXPERTISE.

ATTACHMENT 3

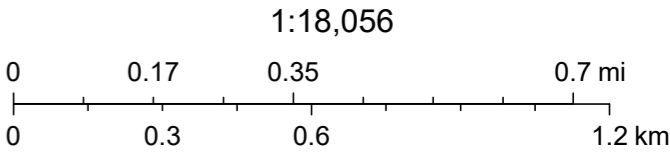
Closure Criteria Worksheet			
Site Name: Onyx 29 CTB 1			
Spill Coordinates:		X: 32.634723	Y: -104.102095
Site Specific Conditions		Value	Unit
1	Depth to Groundwater	75	feet
2	Within 300 feet of any continuously flowing watercourse or any other significant watercourse	67,944	feet
3	Within 200 feet of any lakebed, sinkhole or playa lake (measured from the ordinary high-water mark)	33,422	feet
4	Within 300 feet from an occupied residence, school, hospital, institution or church	13,726	feet
5	i) Within 500 feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or	13,532	feet
	ii) Within 1000 feet of any fresh water well or spring	13,532	feet
6	Within incorporated municipal boundaries or within a defined municipal fresh water field covered under a municipal ordinance adopted pursuant to Section 3-27-3 NMSA 1978 as amended, unless the municipality specifically approves	No	(Y/N)
7	Within 300 feet of a wetland	6,468	feet
8	Within the area overlying a subsurface mine	No	(Y/N)
9	Within an unstable area (Karst Map)	High	Critical High Medium Low
10	Within a 100-year Floodplain	Area of Minimal Flood Hazard	year
11	Soil Type	Reeves- Gypsum land Complex	
12	Ecological Classification	Loamy	
13	Geology	Qp	
NMAC 19.15.29.12 E (Table 1) Closure Criteria		<50'	<50' 51-100' >100'

Onyx PWU 29 CTB 1



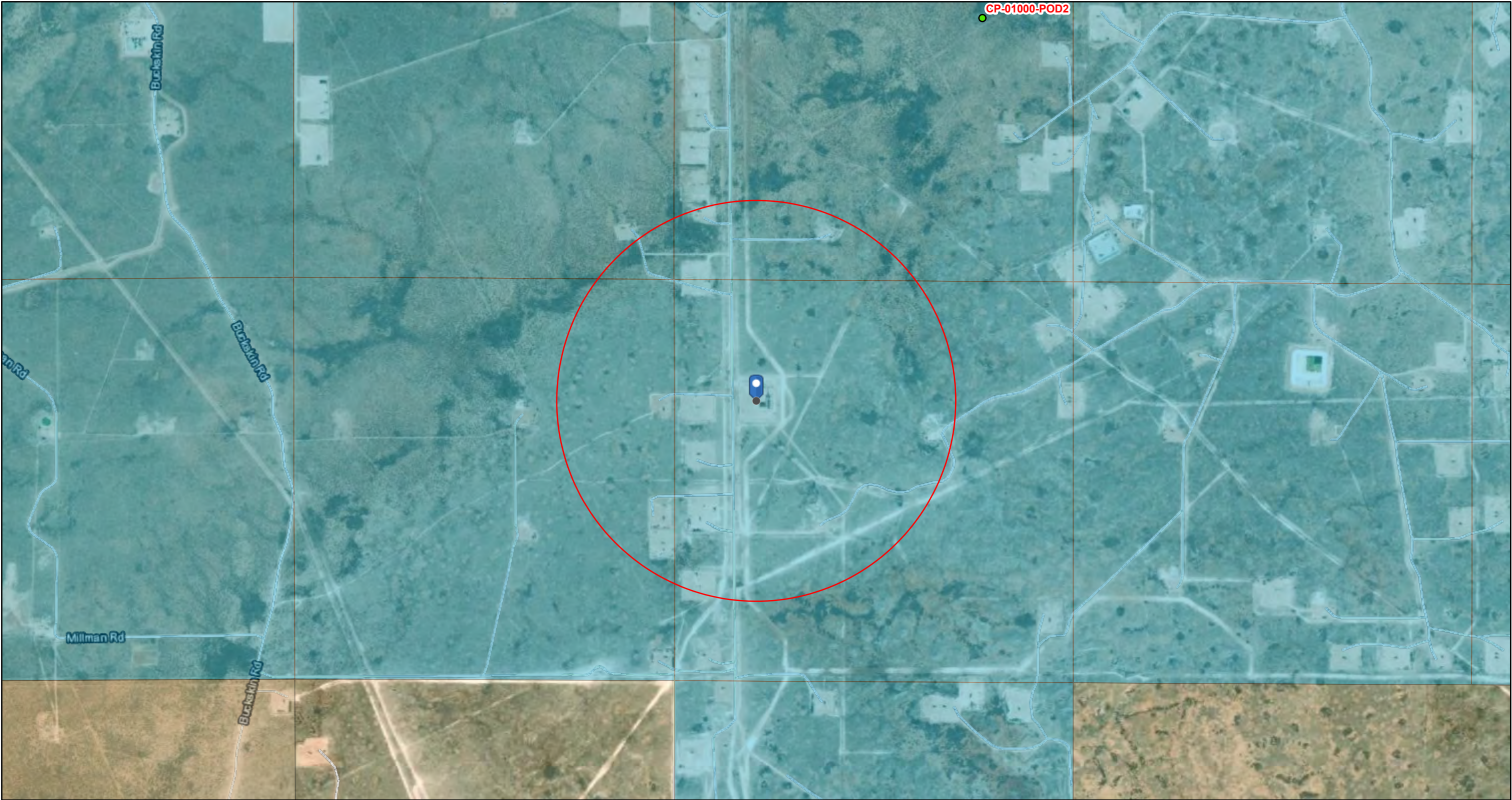
5/17/2022, 9:48:30 AM

- Override 1
- OSE District Boundary
- Both Estates
- GIS WATERS PODs
- New Mexico State Trust Lands
- SiteBoundaries
- Active
- Subsurface Estate



Esri, HERE, Garmin, (c) OpenStreetMap contributors, Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community, Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, U.S. Department of Energy Office of Legacy Management

Onyx PWU 29 CTB 1



5/17/2022, 9:44:57 AM

GIS WATERS PODs

Pending

OSE District Boundary

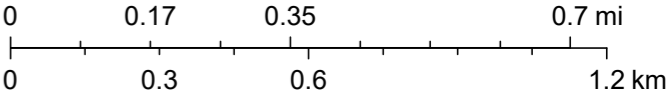
New Mexico State Trust Lands

Subsurface Estate

Both Estates

SiteBoundaries

1:18,056




Esri, HERE, Garmin, (c) OpenStreetMap contributors, Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community, Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, U.S. Department of Energy Office of Legacy Management



New Mexico Office of the State Engineer

Point of Diversion Summary

		(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest)				(NAD83 UTM in meters)			
Well Tag	POD Number	Q64	Q16	Q4	Sec	Tw	Rng	X	Y
	CP 01231 POD1	4	4	2	36	19S	28E	582311	3609372 
Driller License: 1654		Driller Company:				NOT WORKING FOR HIRE--SIRMAN DRILLING AND CONSTRUC			
Driller Name:									
Drill Start Date:	10/21/2013	Drill Finish Date:				10/21/2013		Plug Date:	
Log File Date:	10/29/2013	PCW Rcv Date:						Source:	Shallow
Pump Type:		Pipe Discharge Size:						Estimated Yield:	80 GPM
Casing Size:	8.00	Depth Well:				300 feet		Depth Water:	75 feet
Water Bearing Stratifications:		Top	Bottom	Description					
		200	300	Limestone/Dolomite/Chalk					
Casing Perforations:		Top	Bottom						
		220	300						

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.



New Mexico Office of the State Engineer

Water Right Summary



[get image list](#)

WR File Number: CP 01522 **Subbasin:** CP **Cross Reference:** -
Primary Purpose: PRO 72-12-1 PROSPECTING OR DEVELOPMENT OF NATURAL RESOURCE
Primary Status: PMT PERMIT
Total Acres: 0 **Subfile:** - **Header:** -
Total Diversion: 0 **Cause/Case:** -
Agent: GRR, INC.
Contact: SCOTT GREGORY
User: COG OPERATING LLC

Documents on File

Trn #	Doc	File/Act	Status		Transaction Desc.	From/ To	Acres	Diversion	Consumptive
			1	2					
get images	606352	72121	2015-06-01	PMT	APR	CP 01522	T		3

Current Points of Diversion

(NAD83 UTM in meters)											
POD Number	Well Tag	Source	Q					X	Y	Other Location Desc	
			64Q16Q4	Sec	Tws	Rng					
CP 01231 POD1		Shallow	4	4	2	36	19S	28E	582311	3609372	

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.




5/17/22 9:51 AM

WATER RIGHT SUMMARY

Onyx PWU 29 CTB 1

0.5 mile radius
Nearest USGS Well: 323845104075601
DTGW: 124 feet
Distance: 1.96 miles
Latest Reading: 1999

Legend

-  Circle Measure
-  Feature 1 32391310405140
-  Onyx PWU 29 CTB 1 323900104

323845104075601

Onyx PWU 29 CTB 1



3000 ft



[USGS Home](#)
[Contact USGS](#)
[Search USGS](#)

National Water Information System: Web Interface

USGS Water Resources

Data Category:

Groundwater

Geographic Area:

United States

GO

Click to hide News Bulletins

- Explore the *NEW* [USGS National Water Dashboard](#) interactive map to access real-time water data from over 13,500 stations nationwide.
- [Full News](#) 

Groundwater levels for the Nation

 Important: [Next Generation Monitoring Location Page](#)

Search Results -- 1 sites found

site_no list =

- 323845104075601

Minimum number of levels = 1

[Save file of selected sites](#) to local disk for future upload

USGS 323845104075601 19S.28E.24.32233

Available data for this site

Groundwater: Field measurements

GO

Eddy County, New Mexico

Hydrologic Unit Code 13060011

Latitude 32°38'45", Longitude 104°07'56" NAD27

Land-surface elevation 3,352 feet above NAVD88

This well is completed in the Other aquifers (N9999OTHER) national aquifer.

This well is completed in the Rustler Formation (312RSLR) local aquifer.

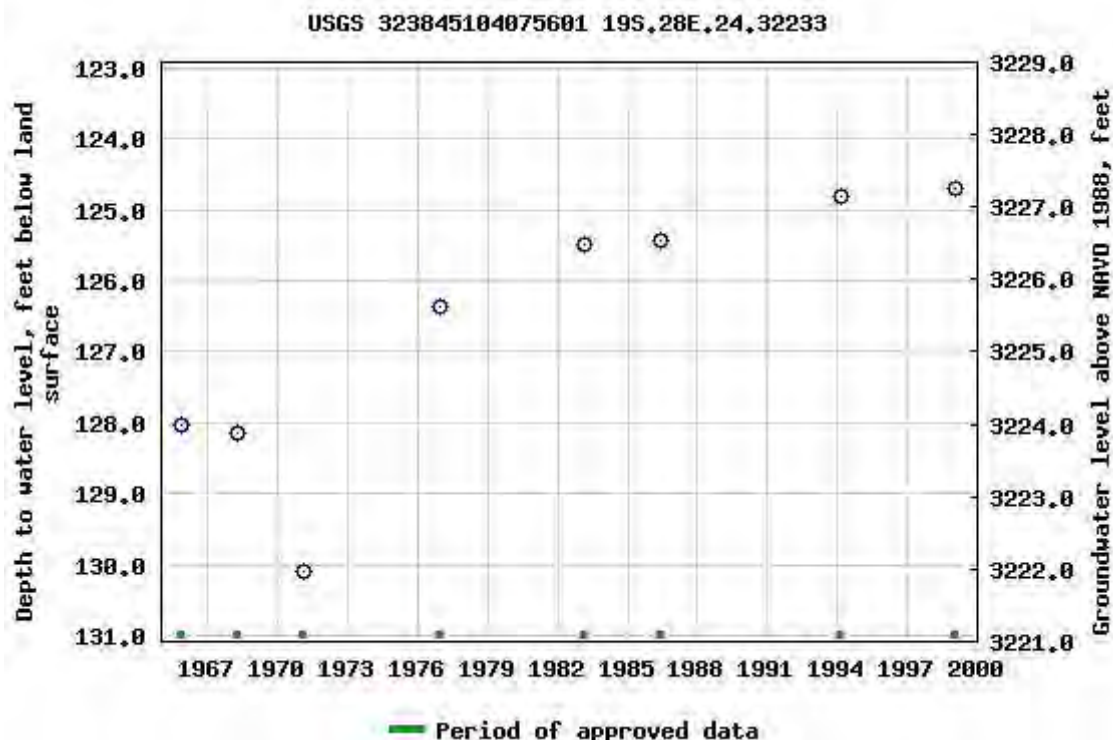
Output formats

[Table of data](#)

[Tab-separated data](#)

[Graph of data](#)

[Reselect period](#)



Breaks in the plot represent a gap of at least one year between field measurements.

[Download a presentation-quality graph](#)

[Questions about sites/data?](#)

[Feedback on this web site](#)

[Automated retrievals](#)

[Help](#)

[Data Tips](#)

[Explanation of terms](#)

[Subscribe for system changes](#)

[News](#)

[Accessibility](#)

[FOIA](#)

[Privacy](#)

[Policies and Notices](#)

[U.S. Department of the Interior](#) | [U.S. Geological Survey](#)

Title: Groundwater for USA: Water Levels

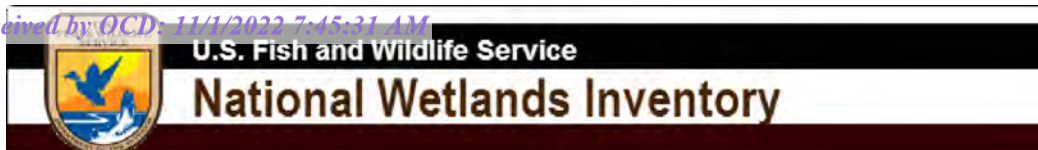
URL: <https://nwis.waterdata.usgs.gov/nwis/gwlevels?>

Page Contact Information: [USGS Water Data Support Team](#)

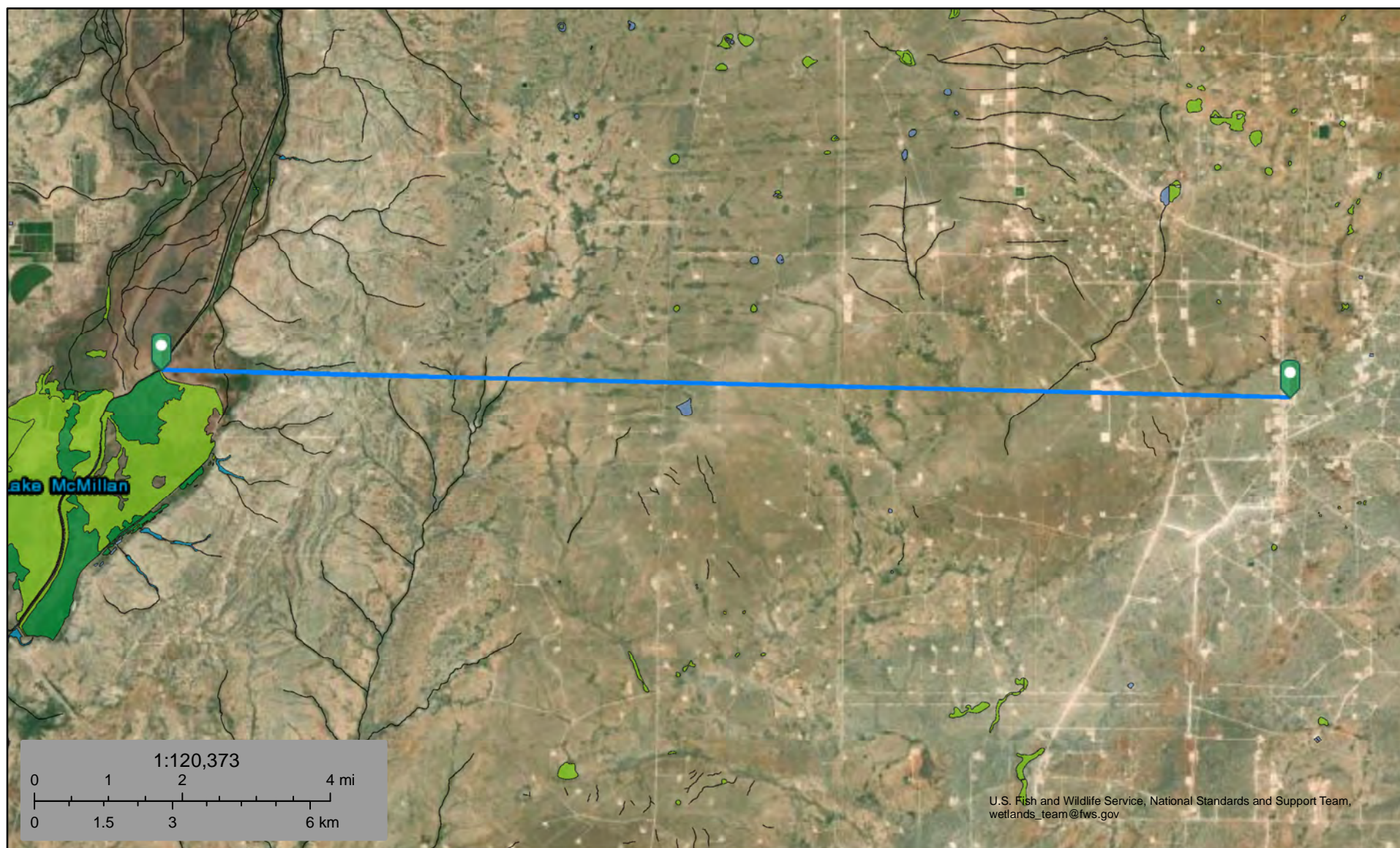
Page Last Modified: 2022-05-17 11:57:58 EDT

0.58 0.49 nadww01





Onyx PWU 29 CTB 1 Watercourse



May 17, 2022

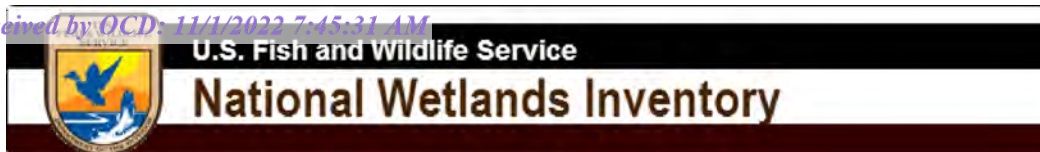
Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond

- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.



Onyx PWU 29 CTB 1 Lakebed



May 17, 2022

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond


- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

Onyx PWU 29 CTB 1

Nearest Residence: 2.60 miles (13,726 feet)

Legend

 Onyx PWU 29 CTB 1

235
Residence

235

Onyx PWU 29 CTB 1



1 mi



[USGS Home](#)
[Contact USGS](#)
[Search USGS](#)

National Water Information System: Web Interface

USGS Water Resources

Data Category:


Groundwater

Geographic Area:

United States

GO

Click to hide News Bulletins

- Explore the *NEW* [USGS National Water Dashboard](#) interactive map to access real-time water data from over 13,500 stations nationwide.
- [Full News](#) 

Groundwater levels for the Nation

 Important: [Next Generation Monitoring Location Page](#)

Search Results -- 1 sites found

site_no list =

- 324000104073601

Minimum number of levels = 1

[Save file of selected sites](#) to local disk for future upload

USGS 324000104073601 19S.28E.13.214411

Available data for this site

Groundwater: Field measurements

GO

Eddy County, New Mexico

Hydrologic Unit Code 13060011

Latitude 32°39'56.2", Longitude 104°07'35.9" NAD83

Land-surface elevation 3,372 feet above NAVD88

This well is completed in the Other aquifers (N9999OTHER) national aquifer.

This well is completed in the Rustler Formation (312RSLR) local aquifer.

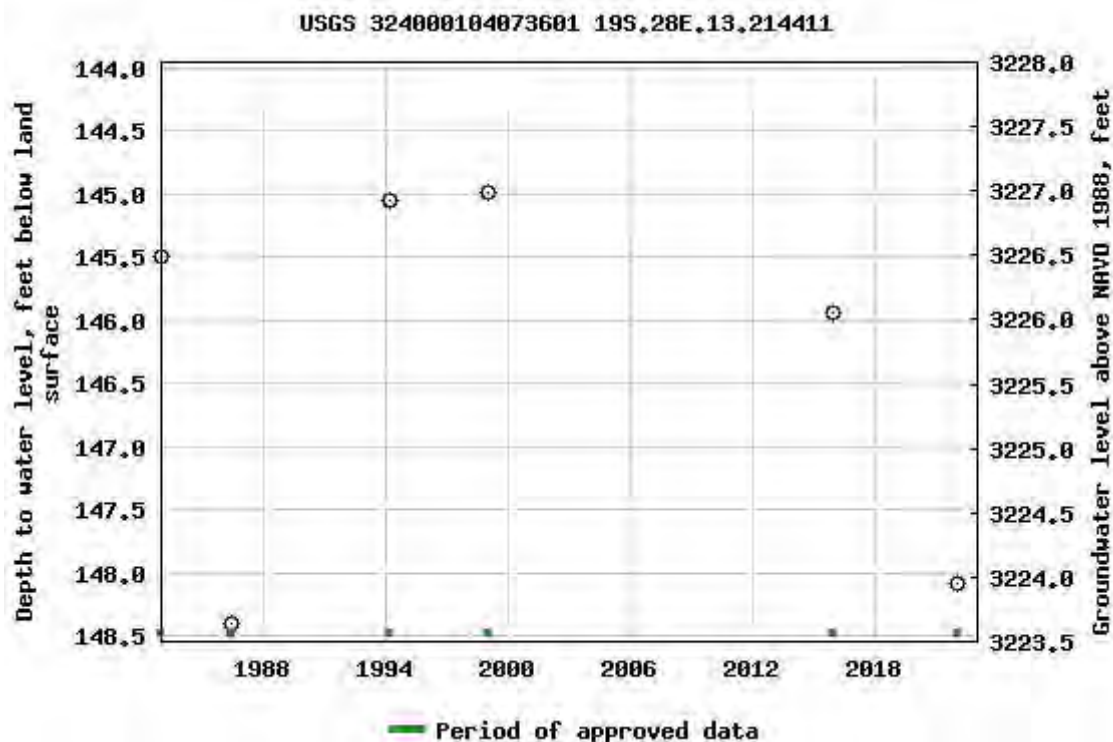
Output formats

[Table of data](#)

[Tab-separated data](#)

[Graph of data](#)

[Reselect period](#)



Breaks in the plot represent a gap of at least one year between field measurements.

[Download a presentation-quality graph](#)

[Questions about sites/data?](#)

[Feedback on this web site](#)

[Automated retrievals](#)

[Help](#)

[Data Tips](#)

[Explanation of terms](#)

[Subscribe for system changes](#)

[News](#)

[Accessibility](#)

[FOIA](#)

[Privacy](#)

[Policies and Notices](#)

[U.S. Department of the Interior](#) | [U.S. Geological Survey](#)

Title: Groundwater for USA: Water Levels

URL: <https://nwis.waterdata.usgs.gov/nwis/gwlevels?>

Page Contact Information: [USGS Water Data Support Team](#)

Page Last Modified: 2022-05-17 12:23:40 EDT


0.56 0.46 nadww01



Onyx PWU 29 CTB 1

Livestock Well: 2.56 miles (13,532 feet)

Legend


 Onyx PWU 29 CTB 1

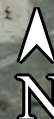
235

Residence

324000104073601

235

Onyx PWU 29 CTB 1 




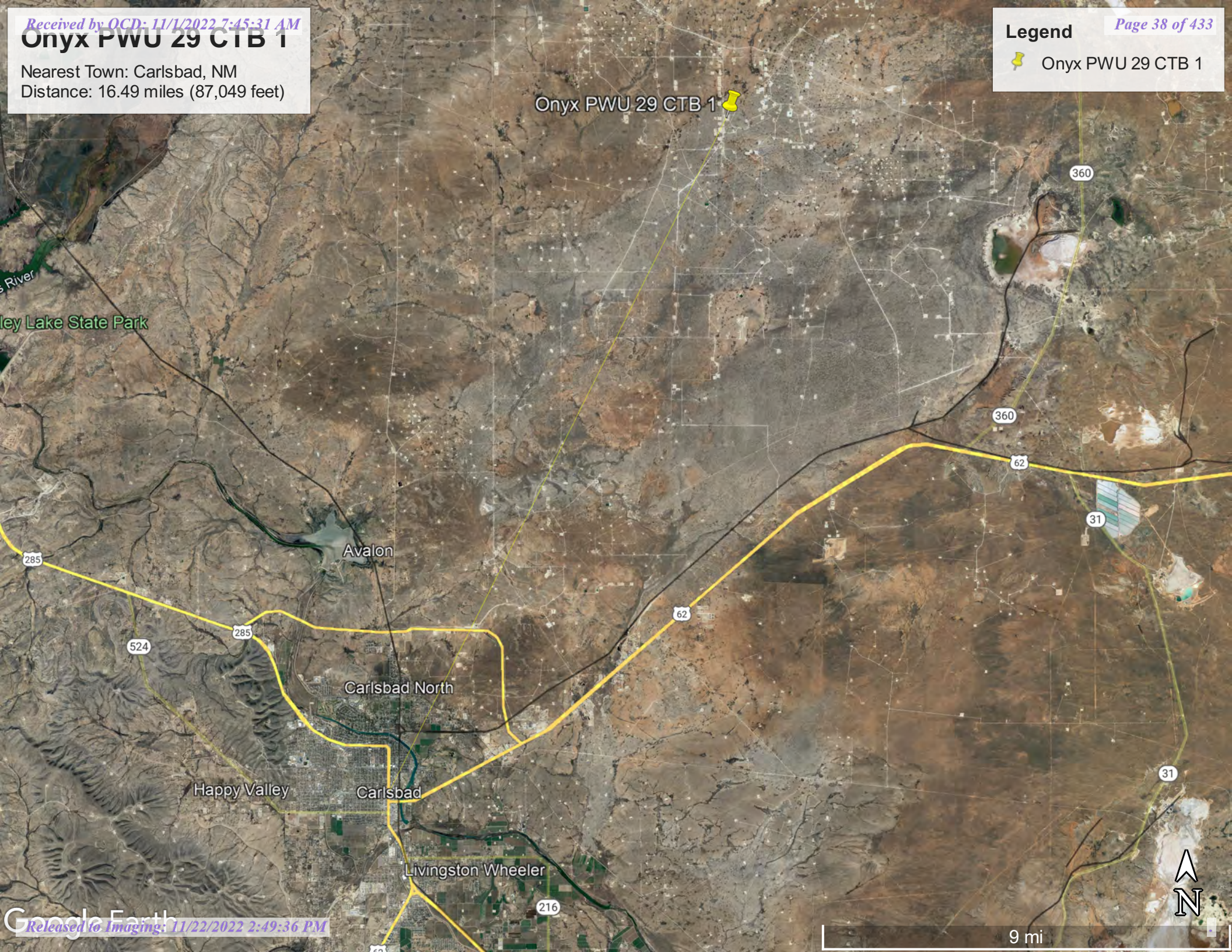
1 mi

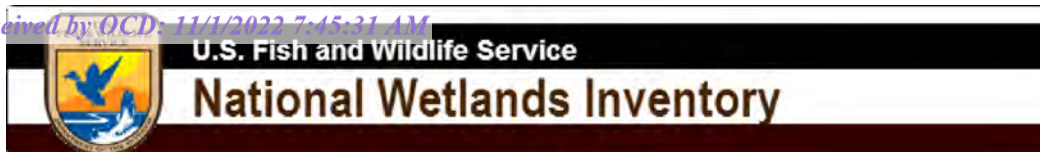
Onyx PWU 29 CTB 1

Nearest Town: Carlsbad, NM
Distance: 16.49 miles (87,049 feet)

Legend

 Onyx PWU 29 CTB 1





Onyx PWU 29 CTB 1 Wetlands



May 17, 2022

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond

- Lake
- Other
- Riverine

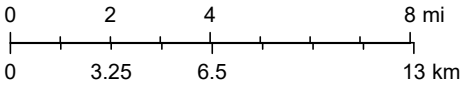
This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

Coal Mines in New Mexico

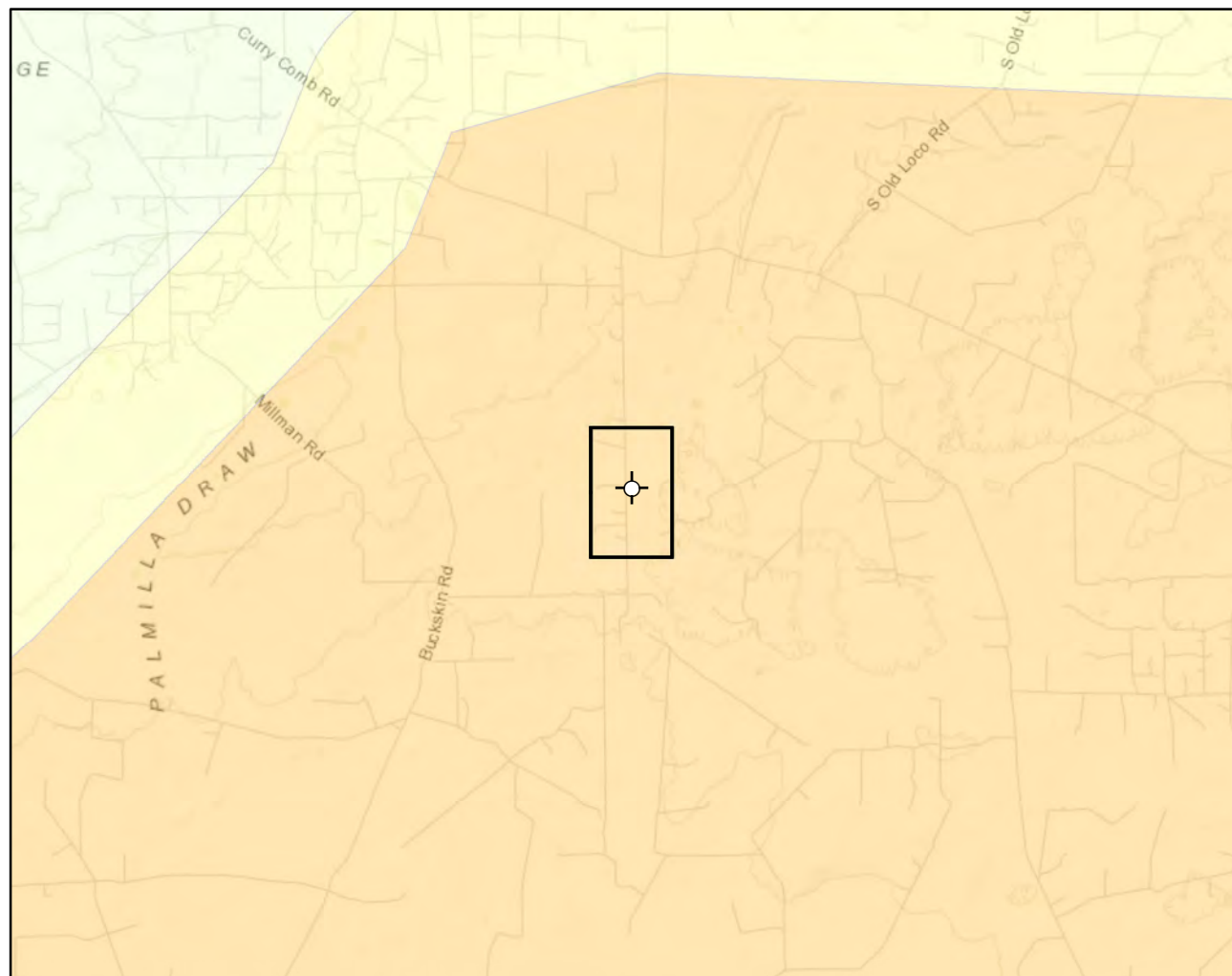


5/17/2022, 10:37:29 AM

1:288,895



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, Sources: Esri, HERE, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

**Karst Potential**

- Critical
- High
- Medium
- Low



Site Location



Site Location Buffer (1,000 ft.)

Overview Map

0 0.25 0.5 1 mi

**Detail Map**

0 150 300 600 ft.



Map Center:
Lat/Long: 32.634090, -104.102832

NAD 1983 UTM Zone 13N
Date: May 29/22



Karst Potential
Onyx 29 CTB 1

FIGURE:

X

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: Inset Map, ESRI 20XX; Overview Map: ESRI World Topographic. Karst potential data sourced from Roswell Field Office, Bureau of Land Management, 2020 or United States Department of the Interior, Bureau of Land Management. (2018). Karst Potential.

VERSATILITY. EXPERTISE.

National Flood Hazard Layer FIRMette



1°6'26"W 32°38'20"N



0 250 500 1,000 1,500 2,000 Feet 1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS

- Without Base Flood Elevation (BFE)
Zone A, V, AE, AH, VE, AP
- With BFE or Depth Zone AE, AO, AH, VE, AP
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD

- 0.2% Annual Chance Flood Hazard, Areas with a 1% annual chance flood with an average depth less than one foot or with drainage areas of less than one square mile
- Future Conditions 1% Annual Chance Flood Hazard
- Area with Reduced Flood Risk due to Levee. See Notes.
- Area with Flood Risk due to Levee

OTHER AREAS

- NO SCREEN
- Area of Minimal Flood Hazard
- Effective LOMRs
- Area of Undetermined Flood Hazard
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES

- Cross Sections with 1% Annual Chance Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS

- Digital Data Available
- No Digital Data Available
- Unmapped

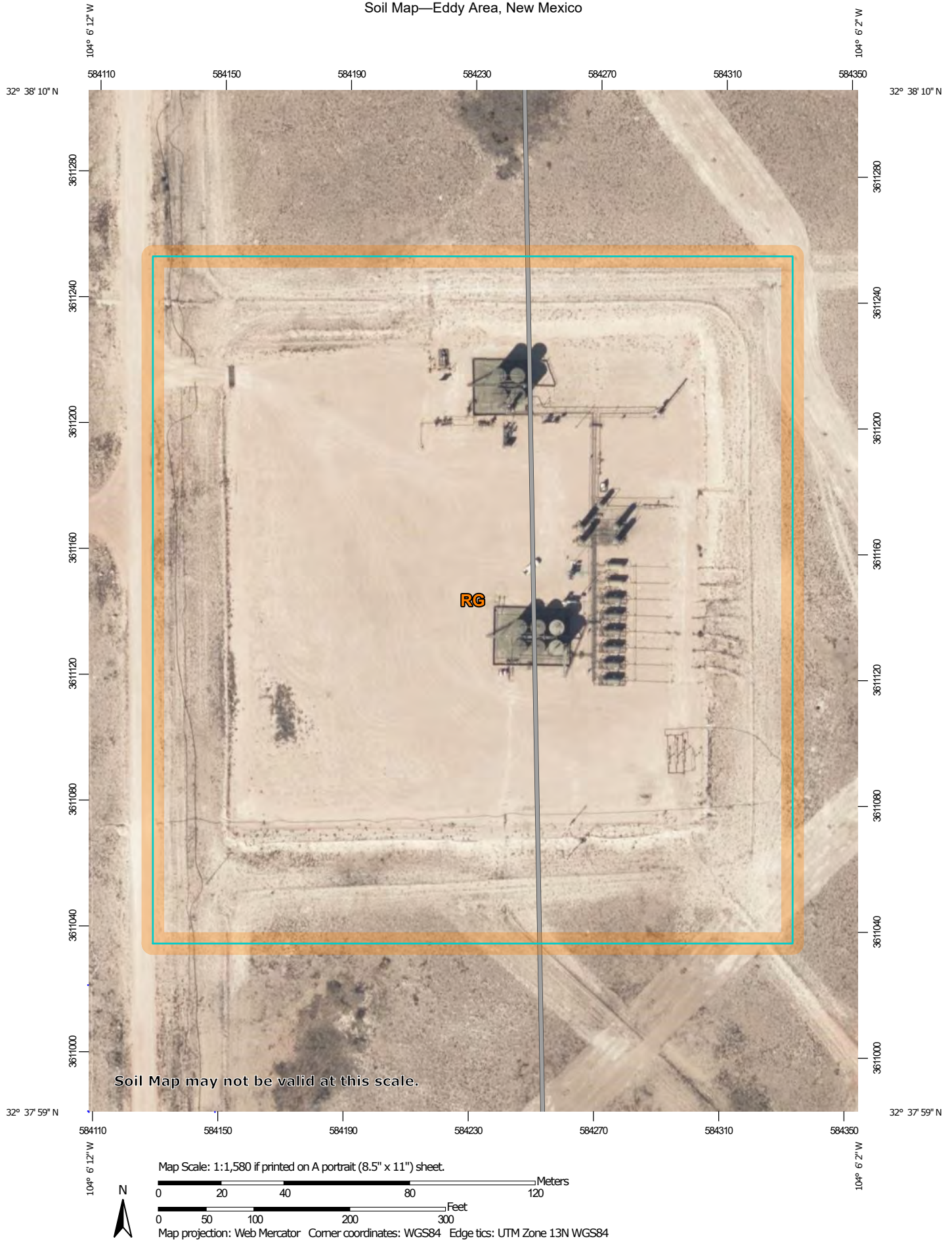
The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards.

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 5/16/2022 at 9:54 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Soil Map—Eddy Area, New Mexico



Natural Resources
Conservation Service


Web Soil Survey
National Cooperative Soil Survey

5/16/2022
Page 1 of 3

Soil Map—Eddy Area, New Mexico

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Eddy Area, New Mexico

Survey Area Data: Version 17, Sep 12, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 27, 2020—Feb 28, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Soil Map—Eddy Area, New Mexico

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
RG	Reeves-Gypsum land complex, 0 to 3 percent slopes	11.1	100.0%
Totals for Area of Interest		11.1	100.0%



Map Unit Description: Reeves-Gypsum land complex, 0 to 3 percent slopes---Eddy Area, New Mexico

Eddy Area, New Mexico

RG—Reeves-Gypsum land complex, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 1w5f
Elevation: 1,250 to 5,000 feet
Mean annual precipitation: 10 to 25 inches
Mean annual air temperature: 57 to 70 degrees F
Frost-free period: 190 to 235 days
Farmland classification: Not prime farmland

Map Unit Composition

Reeves and similar soils: 55 percent
Gypsum land: 30 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Reeves

Setting

Landform: Ridges, plains, hills
Landform position (two-dimensional): Shoulder, backslope, footslope, toeslope
Landform position (three-dimensional): Side slope, crest, nose slope, head slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Residuum weathered from gypsum

Typical profile

H1 - 0 to 8 inches: loam
H2 - 8 to 32 inches: clay loam
H3 - 32 to 60 inches: gypsiferous material

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 25 percent
Gypsum, maximum content: 80 percent
Maximum salinity: Very slightly saline to moderately saline (2.0 to 8.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 4.3 inches)

Map Unit Description: Reeves-Gypsum land complex, 0 to 3 percent slopes---Eddy Area, New Mexico

Interpretive groups

Land capability classification (irrigated): 3s

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: B

Ecological site: R042XC007NM - Loamy

Hydric soil rating: No

Description of Gypsum Land**Setting**

Landform: Ridges, plains, hills

Landform position (two-dimensional): Shoulder, backslope, footslope, toeslope

Landform position (three-dimensional): Side slope, crest, nose slope, head slope

Down-slope shape: Convex

Across-slope shape: Linear

Parent material: Residuum weathered from gypsum

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 8s

Hydric soil rating: No

Minor Components**Largo**

Percent of map unit: 5 percent

Ecological site: R042XC007NM - Loamy

Hydric soil rating: No

Cottonwood

Percent of map unit: 5 percent

Ecological site: R042XC033NM - Salty Bottomland

Hydric soil rating: No

Reagan

Percent of map unit: 5 percent

Ecological site: R042XC007NM - Loamy

Hydric soil rating: No

Data Source Information

Soil Survey Area: Eddy Area, New Mexico

Survey Area Data: Version 17, Sep 12, 2021

Ecological site R042XC007NM Loamy

Accessed: 04/12/2022

General information

**Figure 1. Mapped extent**

Areas shown in blue indicate the maximum mapped extent of this ecological site. Other ecological sites likely occur within the highlighted areas. It is also possible for this ecological site to occur outside of highlighted areas if detailed soil survey has not been completed or recently updated.

Table 1. Dominant plant species

Tree	Not specified
Shrub	Not specified
Herbaceous	Not specified

Physiographic features

This site occurs on uplands landforms, mainly on hill slopes, ridges, plains, terraces and some fan remnants. Slopes range from 1 to 5 percent and average about 3 percent. Average annual precipitation is about 8 to 14 inches. Elevations range from 2,842 to 5,000 feet.

Table 2. Representative physiographic features

Landforms	(1) Plain (2) Terrace (3) Fan piedmont
Flooding frequency	None
Ponding frequency	None
Elevation	2,842–5,000 ft
Slope	0–5%
Aspect	E, S, W

Climatic features

The average annual precipitation ranges from 8 to 13 inches. Variations of 5 inches, more or less, are common. Over 80 percent of the precipitation falls from April through October. Most of the summer precipitation comes in the form of high intensity short duration thunderstorms.

Temperatures are characterized by distinct seasonal changes and large annual and diurnal temperature changes. The average annual temperature is 61 degrees with extremes of 25 degrees below zero in the winter to 112 degrees in the summer.

The average frost-free season is 207 to 220 days. The last killing frost is in late March or early April, and the first killing frost is in late October or early November.

Temperature and rainfall both favor warm season perennial plant growth. In years of abundant spring moisture, annual forbs and cool season grasses can make up an important component of this site. Strong winds blow from the southwest in January through June rapidly drying out the soil during a critical time for cool season plant growth.

Climate data was obtained from <http://www.wrcc.sage.dri.edu/summary/climsmnm.html> web site using 50% probability for freeze-free and frost-free seasons using 28.5 degrees F and 32.5 degrees F respectively.

Table 3. Representative climatic features

Frost-free period (average)	221 days
Freeze-free period (average)	240 days
Precipitation total (average)	13 in

Influencing water features

This site is not influenced by wetland or streams.

Soil features

The soils of this site are deep to moderately deep. The moderately deep soils have either a petrocalcic, petrogypsic or gypsum horizon between 30 and 40 inches.

Surface textures are loam, silt loam, very fine sandy loam, or clay loam. Substratum textures are loam, silty clay loam, clay loam, or silt loams. Subsoil textures are silt loam, clay loam, silty clay loam, gravelly loam, gravelly clay loam or very gravelly loam. Permeability is moderate to slow and the available water holding capacity is high to moderate. The Atoka, Reeves, Russler, Milner soils may have high amounts of CaCO₃, ranging as high as 40 percent in the subsoil. Rock fragments range from 5 to 50 percent in the subsoil. Reeves, Russler, Milner, Holloman soils will have 40 to 80 percent gypsum in the underlying material.

Maximum and minimum values listed below represent the characteristic soils for this site.

Characteristic Soils:

Atoka (petrocalcic)
 Bigetty
 Reagan
 Reakor
 Reeves (gypsum)
 Russler (gypsum)
 Largo
 Russler (gypsum)
 Largo
 Berino
 Tinney
 Midessa
 Ratliff

Holloman (gypsum)
Milner (gypsum)

Table 4. Representative soil features

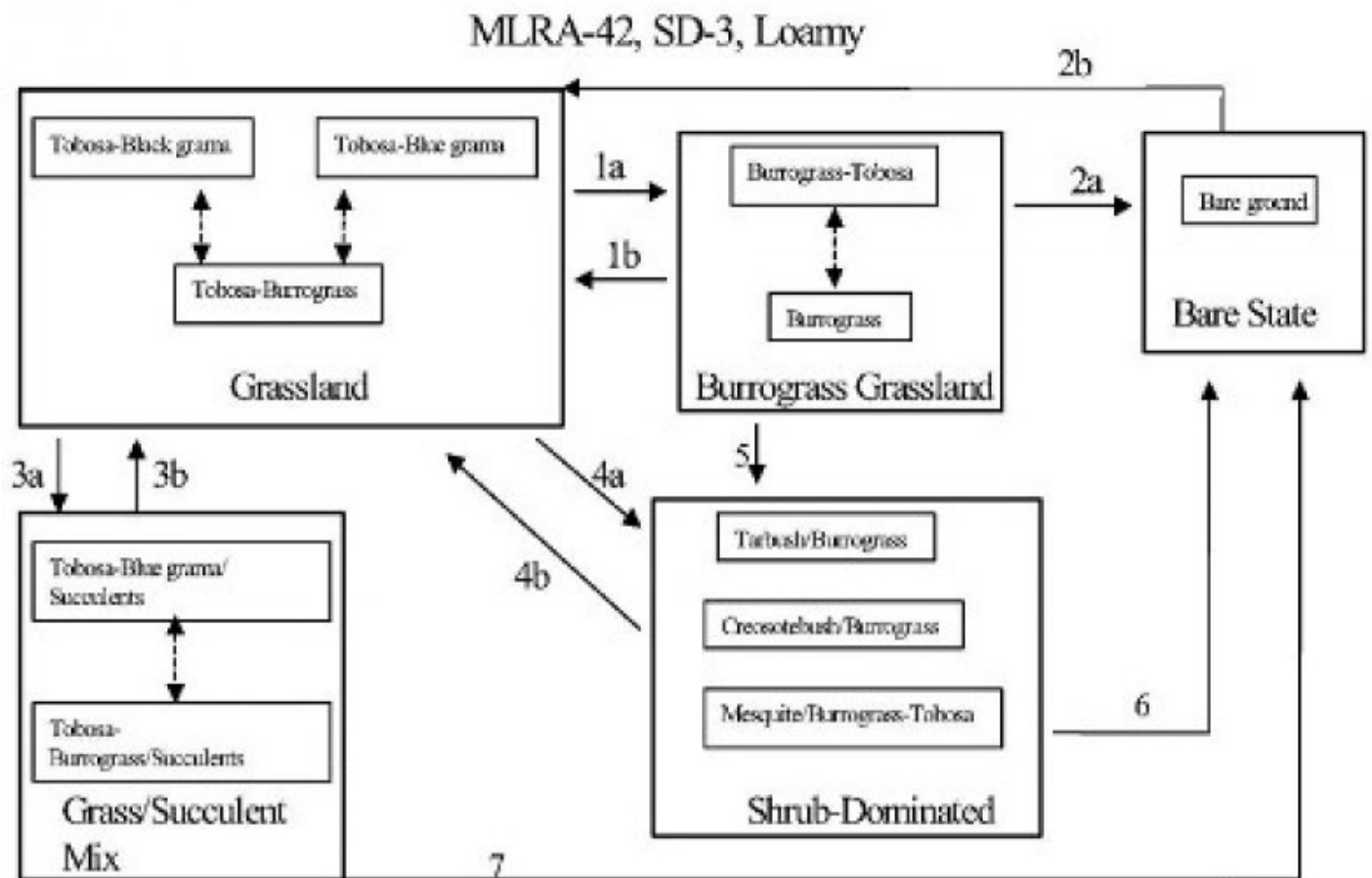
Surface texture	(1) Loam (2) Very fine sandy loam (3) Silt loam
Family particle size	(1) Loamy
Drainage class	Well drained to somewhat excessively drained
Permeability class	Moderate to slow
Soil depth	30–72 in
Surface fragment cover <=3"	0–5%
Surface fragment cover >3"	0%
Available water capacity (0-40in)	5–12 in
Calcium carbonate equivalent (0-40in)	0–10%
Electrical conductivity (0-40in)	0–8 mmhos/cm
Sodium adsorption ratio (0-40in)	0–6
Soil reaction (1:1 water) (0-40in)	6.6–8.4
Subsurface fragment volume <=3" (Depth not specified)	0–5%
Subsurface fragment volume >3" (Depth not specified)	0%

Ecological dynamics

Overview: The Loamy site is associated with the Gyp Upland ecological site with which it intergrades. There is a pronounced increase in alkali sacaton along this interface. The loamy site is also associated with the Gravelly and Shallow ecological sites from which it receives run-on water. The Draw site often dissects Loamy sites and is distinguished from the Loamy site by increased production or greater densities of woody species. The historic plant community has a grassland aspect, dominated by grasses with shrubs and half-shrubs sparse and evenly distributed. Tobosa, black grama and blue grama are the dominant species. Retrogression within this state is characterized by a decrease in black and blue grama and an increase in burrograss. Continuous overgrazing and drought can initiate a transition to a Burrograss- Grassland state. Continued reduction in grass cover and resulting infiltration problems may eventually effect a change to a Bare State, with very little or no remaining grass cover. Alternatively, creosotebush, tarbush or mesquite may expand or invade. Transitions back to a Grassland State from a Bare or Shrub-Dominated state are costly and may not be economically feasible. Decreased fire frequency may play a part in the transition to the Grass/Succulent Mix state with increased amounts of cholla and prickly pear.

State and transition model

Plant Communities and Transitional Pathways (diagram)



1a. Soil drying, overgrazing, drought, soil surface sealing. 1b. Restore natural overland flow, increase infiltration, prescribed grazing.

2a. Severe reduction in cover, soil surface sealing, decreased infiltration, erosion. 2b. Restore hydrology, break up physical crust, range seeding, prescribed grazing.

3a. Lack of fire, overgrazing, hail storms or other physical disturbance, drought. 3b. Prescribed fire, brush control, prescribed grazing.

4a. Seed dispersal of shrubs, persistent loss of grass cover, competition by shrubs, lack of fire. 4b. Brush control, range seeding -dependent on amount of grass (seed bank) remaining.

5. Loss of grass cover, seed dispersal of shrubs, competition by shrubs.

6. & 7. Brush control with continued loss of grass cover, soil sealing, erosion.

Figure 4.

State 1 Historic Climax Plant Community

Community 1.1 Historic Climax Plant Community

State Containing Historic Climax Plant Community
Grassland:

The historic plant community has a grassland aspect, dominated by grasses with shrubs and half-shrubs sparse and evenly distributed. Black grama, blue grama, and tobosa are the dominant grass species. There are a variety of

perennial forbs and their production varies widely by season and year. Globemallow, verbena, groundsels, croton and filaree are forbs commonly found on this site. Fourwing saltbush and winterfat are two of the more palatable shrubs. The Loamy ecological site encompasses a wide variety of soils, with surface textures ranging from sandy loams to clay loams. Soil depths range from shallow to very deep and can include sub surface features such as calcic, petrocalcic, and gypsic horizons. These variations cause differences in plant community composition and dynamics. Black grama is found at highest densities on coarser textured sandy loams, with blue grama preferring finer textured loam and silt loam, and tobosa favoring lower landscape positions and loam to clay loam surface textures. Burrograss may often be the dominant grass species on silty soils, perhaps in part due to the seedlings ability to auger into and establish on physically crusted soils. Gypsum influenced soils typically have greater amounts of tobosa, burrograss, and ephedra. There is greater representation of sideoats and vine mesquite within the tobosa-blue grama community. Retrogression under continuous heavy grazing results in a decrease of black grama, blue grama, sideoats grama, plains bristlegrass, bush muhly, cane bluestem, vine mesquite, winterfat, and fourwing saltbush. Species such as burrograss, threeawns, sand dropseed, sand muhly, and broom snakeweed increase under continuous heavy grazing or prolonged periods of drought. Under continued retrogression burrograss can completely dominate the site. Creosotebush, tarbush, and mesquite, can also dominate. Cholla and prickly pear can increase on areas that are disturbed or overgrazed.

Diagnosis: Tobosa, black grama, and blue grama are the dominant species. Grass cover is uniformly distributed with few large bare areas. Shrubs are sparse and evenly distributed. Slopes range from level to gently sloping and usually display limited evidence of active rills and gully formation if plant cover remains intact. Litter movement associated with overland flow is limited to smaller size class litter and short distances.

Other shrubs include: yucca, mesquite, tarbush, cholla and creosote bush.

Other forbs include: desert holly, scorpionweed, bladderpod, flax, nama, fleabane, Indianwheat, Indian blanket flower, groundcherry, deerstongue, and rayless goldenrod.

Table 5. Annual production by plant type

Plant Type	Low (Lb/Acre)	Representative Value (Lb/Acre)	High (Lb/Acre)
Grass/Grasslike	585	833	1080
Forb	39	55	72
Shrub/Vine	26	37	48
Total	650	925	1200

Table 6. Ground cover

Tree foliar cover	0%
Shrub/vine/liana foliar cover	0%
Grass/grasslike foliar cover	15-30%
Forb foliar cover	0%
Non-vascular plants	0%
Biological crusts	0%
Litter	25-30%
Surface fragments >0.25" and <=3"	0%
Surface fragments >3"	0%
Bedrock	0%
Water	0%
Bare ground	40-50%

Figure 6. Plant community growth curve (percent production by month).

NM2807, R042XC007NM Loamy HCPC. R042XC007NM Loamy HCPC Warm Season Plant Community..

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	0	0	5	10	10	25	30	15	5	0	0

State 2

Burrograss-Grassland

Community 2.1

Burrograss-Grassland

Burrograss-Grassland: Changes in hydrology resulting in decreased available soil moisture, reduces grass cover and increases bare ground. Burrograss is the dominant grass. Tobosa cover is variable and can range from sizeable areas to small patches occupying only depressions or the lowest and wettest positions within the site. Threeawns, ear muhly, sand muhly, and fluffgrass occur at increased densities compared to the grassland state. Shrub densities may increase especially mesquite, creosotebush or tarbush. Retrogression within this state is characterized by a further decrease in grass cover and increased bare ground. Further deterioration of this site can result in the transition to a bare state or becoming shrub dominated.

Diagnosis: Burrograss is the dominant species. Grass cover is no longer uniformly distributed, instead tending to be patchy with large areas of bare ground present. Physical crusts are present in bare areas reducing infiltration and suppressing seedling establishment by any grass species other than burrograss.

Transition to Burrograss-Grassland (1a): Transitions from grassland to a burrograss-grassland state may occur due to changes in hydrology. Gullies, roads or obstructions that alter natural water flow patterns may cause this transition. Changes in surface hydrology may also occur due to overgrazing or drought. The reduction in grass cover promotes increased soil physical crusts and reduces infiltration. 5

Key indicators of approach to transition:

- ? Diversion of overland flow resulting in decreased soil moisture.
- ? Increase in amount of burrograss cover
- ? Reduction in grass cover and increase in size and frequency of bare patches.
- ? Formation of physical crusts—indicating reduced infiltration.
- ? Evidence of litter movement—indicating loss or redistribution of organic matter.

Transition back to Grassland (1b) The natural hydrology of the site must be returned. Culverts, turnouts, or rerouting roads may help re-establish natural overland flow, if roads or trails have altered the hydrology. Erosion control structures or shaping and filling gullies may help regain natural flow patterns and establish vegetation if the flow has been channeled. Breaking up physical crusts by soil disturbance may promote infiltration and seedling emergence. Allow natural revegetation to take place. Prescribed grazing will help ensure proper forage utilization and reduce grass loss due to grazing.

State 3

Bare State

Community 3.1

Bare State

Bare State: Extremely low ground cover, soil degradation and erosion characterize this state. Very little vegetation remains. Burrograss is the dominant grass and cover is extremely patchy. Physical soil crusts are extensive. Erosion and resource depletion increase as site degrades.

Diagnosis: Very little cover remains. Erosion is evident by soil sealing, water flow patterns, pedestals or terracettes. Rills and gullies may be present and active.

Transition to Bare State (2a): Extended drought, continuous heavy grazing, or other disturbance that severely

depletes grass cover can effect this transition. As grass cover decreases, sheet flow and erosion increase, and physical soil crusts form, thereby further reducing infiltration.

Key indicators of approach to transition:

- ? Continued reduction in grass cover.
- ? Increased soil surface sealing.
- ? Increased erosion.
- ? Reduced aggregate stability in bare areas.

Transition back to Grassland (2b) Restore the hydrology, see (1a). With the extent of grass loss range seeding may be necessary. Utilizing livestock or mechanical means to break up the physical crusts may increase infiltration and aid seedling establishment. Prescribed grazing will help ensure adequate deferment period following seeding, and proper forage utilization once the grass stand is well established. The degree to which this site is capable of recovery depends on the restoration of hydrology, extent of degradation to soil resources, and adequate rainfall necessary to establish grasses.

State 4

Grass/Succulent Mix

Community 4.1

Grass/Succulent Mix

Grass / Succulent Mix: Increased representations of succulents characterize this site. Increased densities of cholla or pricklypear is recognized as a management concern, but their impact on grass production is unclear. Light to medium cholla or prickly pear infestation doesn't seem to greatly reduce grass production, however it limits access to palatable grasses and interferes with livestock movement and handling. Tobosa and blue grama are the dominant species on this site. Retrogression within this site is characterized by a decrease in blue grama and an increase in succulents, tobosa and burrograss.

Diagnosis: Cholla or prickly pear is found at increased densities. Grass cover is variable ranging from uniformly distributed to patchy with frequent areas of bare ground present. Tobosa or blue grama is the dominant grass species.

Transition to Grass/Succulent Mix (3a): If fire was historically a part of desert grassland ecosystem and played a role in suppressing seedlings of shrubs and succulents, then fire suppression may favor the increase of succulents.¹ Heavy grazing by livestock or other physical disturbances may help disseminate seed and increase the establishment of succulents. Areas historically overgrazed by sheep are sometimes associated with higher densities of Succulents. Intense hailstorms can spread pricklypear by breaking off joints causing new plants to take root.³ During severe drought perennial grass cover can decline significantly, leaving resources available for use by more drought tolerant succulents. Cholla and pricklypear are both adapted to and favored by drought due to the ability of their shallow, wide spreading root systems to absorb and store water.⁴

Key indicators of approach to transition:

- ? Decrease or change in distribution of grass cover.
- ? Increase in amount of succulent seedlings.
- ? Increased cover of succulents.

Transition back to Grassland (3b) Fire is an effective means of controlling cholla and prickly pear if adequate grass cover remains to carry fire.² Cholla greater than two feet tall or pricklypear with a large amount of pads (>15-20) are harder to kill. Chemical control is effective in controlling prickly pear and cholla; apply when growth starts in May. Hand grubbing is also effective if cholla or pricklypear is severed 2-4 inches below ground and care is taken not to let broken joints or pads take root. Stacking and burning piles and grubbing during winter or drought help keeps broken joints and pads from rooting. Prescribed grazing will help ensure proper forage utilization and sustain grass cover.

State 5

Shrub Dominated

Community 5.1

Shrub Dominated

Shrub Dominated: Increased shrub cover characterizes this state. Mesquite, creosotebush, and/or tarbush are the dominant shrub species. Burrograss or tobosa is the dominant grass species. Grass cover is decreased, typically patchy with large bare areas present; however, sometimes grass cover can remain relatively high for extended periods when associated with light to moderate infestations of mesquite. Variations in soil characteristics play a part in determining which shrub species increase. Mesquite is well adapted to a wide range of soil types, but increases more often on deep soils low in carbonates, that have a sandy surface overlying finer textured soils. Tarbush prefers finer textured, calcareous soils, usually in lower positions that receive some extra water. Creosotebush is less tolerant of fine textured soils, preferring sandy, calcareous soils that have some gravel. Creosotebush also does well on soils that are shallow over caliche. Retrogression within this state is characterized by a decrease in tobosa, and an increase in burrograss. As the site continues to degrade shrub cover continues to increase and grass cover is severely reduced.

Diagnosis: Mesquite, Creosotebush, and/or tarbush are the dominant shrubs. Blue grama and black grama cover is low or absent. Burrograss or tobosa are the dominant grasses. Typically grass cover is patchy with large interconnected bare areas present. Physical soil crusts are present, especially on silt loam surface soils.

Transition to Shrub Dominated (4a): Wildlife and livestock consume and disperse mesquite seeds. Flood events may wash creosote or tarbush seeds off adjacent gravelly sites onto the loamy site and supply adequate moisture for germination. Persistent loss of grass cover due to overgrazing or drought can cause large bare patches, providing competition free areas for shrub seedling establishment. As shrub cover increases, competition for soil resources, especially water, becomes a major factor in further reducing grass cover. Reduction of fire, due to either fire suppression policy or loss of adequate fine fuels may increase the probability of shrub encroachment. Increased soil surface physical crusts and associated decreased infiltration, may prevent the establishment of grass seedlings.

Transition to Shrub Dominated (5): The dispersal of creosotebush, tarbush or mesquite seed, combined with loss of grass cover and resource competition by shrubs may cause this transition.

Key indicators of approach to transition:

- ? Decreased grass and litter cover.
- ? Increased bare patch size.
- ? Increased physical soil crusts.
- ? Increased amount of mesquite, creosotebush, or tarbush seedlings.
- ? Increased shrub cover.

Transition back to Grassland (4b) Brush control will be necessary to remove shrubs and eliminate competition for resources necessary for grass establishment or reproduction. Seeding may be necessary on those sites where desired grass species are absent or very limited. Pitting and seeding may increase the chances of successful grass establishment. Prescribed grazing will help ensure adequate time is elapsed before grazing seeded area is allowed and proper forage utilization following seeding establishment.

Transition to Bare State (6): If grass cover on the shrub-dominated state is severely limited and shrubs are removed a bare state may result. This transition will depend on amount of grasses or seed remaining, whether site is seeded, or if seeding is successful.

Transition to Bare State (7): Removal of succulents and continued overgrazing or drought may cause loss of remaining grasses and erosion. Soil surface physical crusting may also be an important factor in inhibiting grass seedling establishment

Additional community tables

Table 7. Community 1.1 plant community composition

Group	Common Name	Symbol	Scientific Name	Annual Production (Lb/Acre)	Foliar Cover (%)
Grass/Grasslike					

Grass/Grasslike					
1	Warm Season			278–324	
	tobosagrass	PLMU3	<i>Pleuraphis mutica</i>	278–324	–
2	Warm Season			9–46	
	burrograss	SCBR2	<i>Scleropogon brevifolius</i>	9–46	–
3	Warm Season			231–278	
	black grama	BOER4	<i>Bouteloua eriopoda</i>	231–278	–
	blue grama	BOGR2	<i>Bouteloua gracilis</i>	231–278	–
4	Warm Season			28–46	
	sideoats grama	BOCU	<i>Bouteloua curtipendula</i>	28–46	–
5	Warm Season			46–93	
	bush muhly	MUPO2	<i>Muhlenbergia porteri</i>	46–93	–
	plains bristlegrass	SEVU2	<i>Setaria vulpiseta</i>	46–93	–
6	Warm Season			9–28	
	Arizona cottontop	DICA8	<i>Digitaria californica</i>	9–28	–
7	Warm Season			46–93	
	threeawn	ARIST	<i>Aristida</i>	46–93	–
	muhly	MUHLE	<i>Muhlenbergia</i>	46–93	–
	sand dropseed	SPCR	<i>Sporobolus cryptandrus</i>	46–93	–
8	Warm Season			28–46	
	Graminoid (grass or grass-like)	2GRAM	<i>Graminoid (grass or grass-like)</i>	28–46	–
Shrub/Vine					
9	Shrub			9–28	
	fourwing saltbush	ATCA2	<i>Atriplex canescens</i>	9–28	–
	jointfir	EPHED	<i>Ephedra</i>	9–28	–
	winterfat	KRLA2	<i>Krascheninnikovia lanata</i>	9–28	–
	cane bluestem	BOBA3	<i>Bothriochloa barbinodis</i>	5–24	–
	Arizona cottontop	DICA8	<i>Digitaria californica</i>	5–24	–
	plains bristlegrass	SEVU2	<i>Setaria vulpiseta</i>	5–24	–
10	Shrub			9–28	
	javelina bush	COER5	<i>Condalia ericoides</i>	9–28	–
	broom snakeweed	GUSA2	<i>Gutierrezia sarothrae</i>	9–28	–
	Grass, annual	2GA	<i>Grass, annual</i>	5–15	–
11	Shrubs			9–28	
	Shrub (>.5m)	2SHRUB	<i>Shrub (>.5m)</i>	9–28	–
Forb					
12	Forb			9–46	
	threadleaf ragwort	SEFLF	<i>Senecio flaccidus var. flaccidus</i>	9–46	–
	globemallow	SPHAE	<i>Sphaeralcea</i>	9–46	–
	verbena	VEPO4	<i>Verbena polystachya</i>	9–46	–
	broom snakeweed	GUSA2	<i>Gutierrezia sarothrae</i>	5–15	–
	pricklypear	OPUNT	<i>Opuntia</i>	5–15	–
13	Forb			9–28	
	croton	CROTO	<i>Croton</i>	9–28	–

	woolly groundsel	PACA15	<i>Packera cana</i>	9–28	–
14	Forb			9–28	
	Goodding's tansyaster	MAPIG2	<i>Machaeranthera pinnatifida</i> ssp. <i>gooddingii</i> var. <i>gooddingii</i>	9–28	–
	woolly paperflower	PSTA	<i>Psilostrophe tagetina</i>	9–28	–
15	Forb			9–28	
	redstem stork's bill	ERCI6	<i>Erodium cicutarium</i>	9–28	–
	Texas stork's bill	ERTE13	<i>Erodium texanum</i>	9–28	–
16	Forb			9–28	
	Forb (herbaceous, not grass nor grass-like)	2FORB	<i>Forb (herbaceous, not grass nor grass-like)</i>	9–28	–

Animal community

This site provides habitats which support a resident animal community that is characterized by pronghorn antelope, black-tailed jackrabbit, black tailed prairie dog, yellow-faced pocket gopher, banner-tailed kangaroo rat, hispid cotton rat, swift fox, burrowing owl, horned lark, mockingbird, meadowlark, mourning dove, scaled quail, Great Plains toad, plains spadefoot toad, prairie rattlesnake and western coachwhip snake.

Hydrological functions

The runoff curve numbers are determined by field investigations using hydraulic cover conditions and hydrologic soil groups.

Hydrologic Interpretations
 Soil Series Hydrologic Group
 Atoka C
 Bigetty B
 Ratliff B
 Reyab B
 Holloman B
 Largo B
 Holloman B
 Bigetty B
 Berino B
 Reagan B
 Reakor B
 Reeves B
 Russler C

Recreational uses

This site offers limited potential for hiking, horseback riding, nature observation and photography. Game bird, antelope and predator hunting are also limited.

Wood products

This site has no potential for wood products

Other products

This site is suitable for grazing by all kinds and classes of livestock, during all seasons of the year. Under retrogression, such plants as black grama, blue grama, sideoats grama, bush muhly, plains bristlegrass, Arizona cottontop, fourwing saltbush and winterfat decrease and there is an increase in burrograss, threeawns, sand dropseed, muhlys, broom snakeweed and javilinabush. Under continued retrogression, burrograss can completely

dominate the site. Creosotebush, mesquite, and tarbush can also dominate. Grazing management alone will not improve the site in the above situation. This site is well suited to a system of management that rotates the season of use.

Other information

Guide to Suggested Initial Stocking Rate Acres per Animal Unit Month

Similarity Index Ac/AUM

100 - 76 3.0 – 4.2

75 – 51 4.1 – 5.5

50 – 26 5.3 – 7.0

25 – 0 7.1 +

Inventory data references

Other References:

Data collection for this site was done in conjunction with the progressive soil surveys within the Southern Desertic Basins, Plains and Mountains, Major Land Resource Areas of New Mexico. This site has been mapped and correlated with soils in the following soil surveys. Eddy County Lea County and Chavez County.

Other references

Literature References:

1. Brooks, M.L., AND D.A. Pyke. 2001. Invasive plants and fire in the deserts of North America. Pages 1–14 in K.E.M. Galley and T.P. Wilson (eds.). Proceedings of the Invasive Species Workshop: the Role of Fire in the Control and Spread of Invasive Species.
2. Bunting, S.C., H.A. Wright, and L.F. Neuenschwander. 1980. Long-term effects of fire on cactus in the Southern Mixed Prairie of Texas. J. Range. Manage. 33: 85-88.
3. Laycock, W.A. 1982. Hail as an ecological factor in the increase of prickly pear cactus. p. 359-361. In: J.A. Smith and V.W. Hays (eds.) Proc. XIV Int. Grassland Congr. Westview Press, Boulder, Colo.
4. Vallentine, J.F. 1989. Range Developments and Improvements. 3rd Edition. Academic Press. San Diego, California.
5. U.S. Department of Agriculture, Natural Resources Conservation Service. 2001. Soil Quality Information Sheet. Rangeland Soil Quality—Physical and Biological Soil Crusts. Rangeland Sheet 6, [Online]. Available: <http://www.statlab.iastate.edu/survey/SQL/range.html>

Contributors

David Trujillo

Don Sylvester

Rangeland health reference sheet

Interpreting Indicators of Rangeland Health is a qualitative assessment protocol used to determine ecosystem condition based on benchmark characteristics described in the Reference Sheet. A suite of 17 (or more) indicators are typically considered in an assessment. The ecological site(s) representative of an assessment location must be known prior to applying the protocol and must be verified based on soils and climate. Current plant community cannot be used to identify the ecological site.

Author(s)/participant(s)	
Contact for lead author	
Date	
Approved by	
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

Indicators

1. **Number and extent of rills:**

2. **Presence of water flow patterns:**

3. **Number and height of erosional pedestals or terracettes:**

4. **Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground):**

5. **Number of gullies and erosion associated with gullies:**

6. **Extent of wind scoured, blowouts and/or depositional areas:**

7. **Amount of litter movement (describe size and distance expected to travel):**

8. **Soil surface (top few mm) resistance to erosion (stability values are averages - most sites will show a range of values):**

9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):**

10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:**

11. **Presence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for compaction on this site):**

12. **Functional/Structural Groups** (list in order of descending dominance by above-ground annual-production or live foliar cover using symbols: >>, >, = to indicate much greater than, greater than, and equal to):

Dominant:

Sub-dominant:

Other:

Additional:

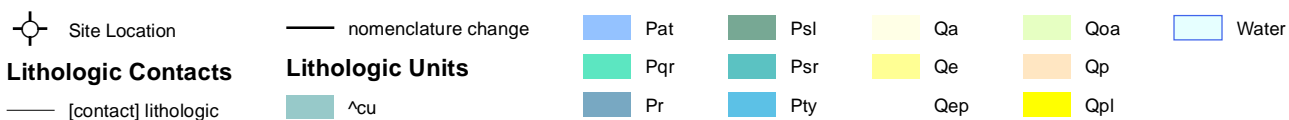
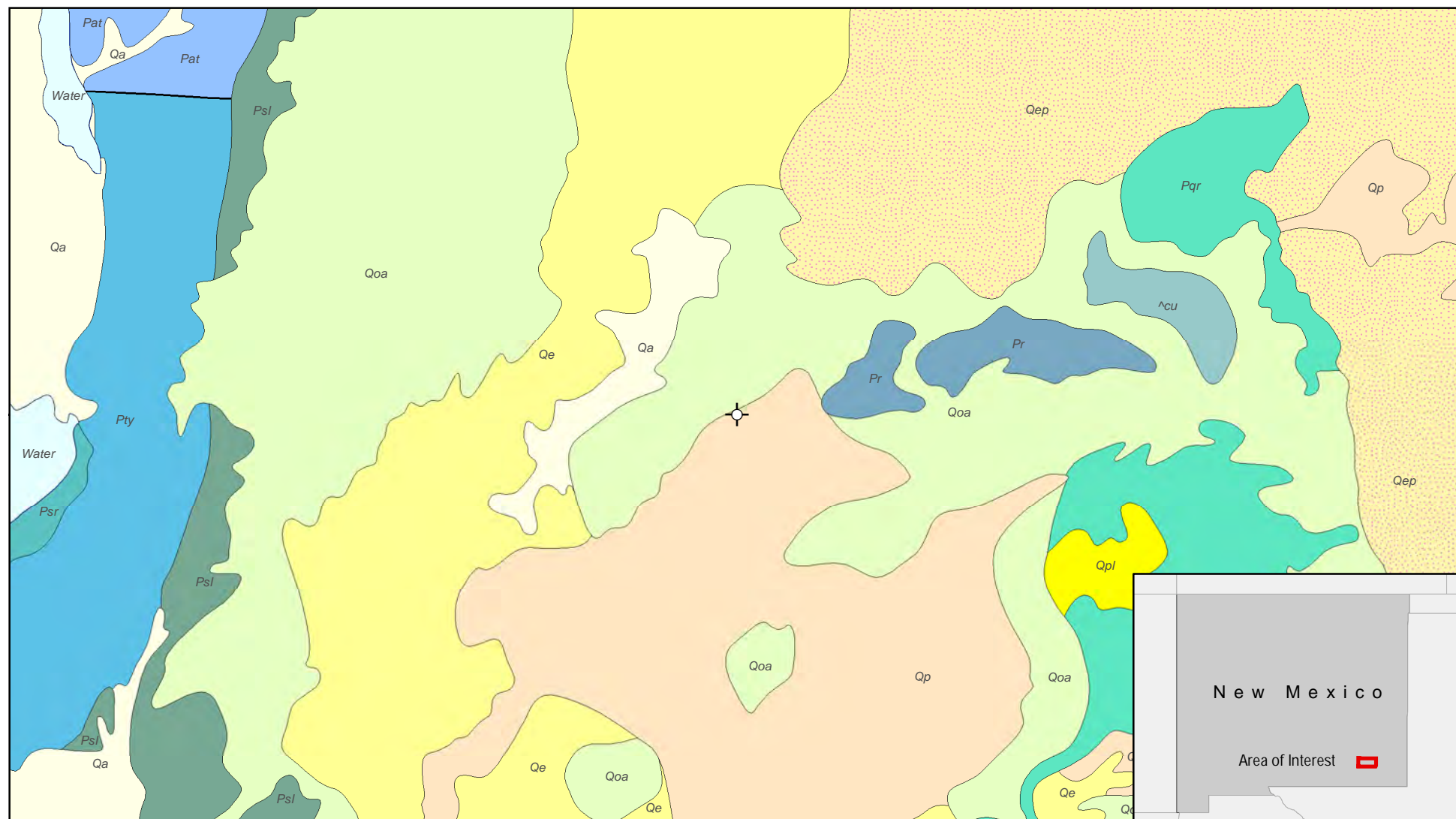
13. **Amount of plant mortality and decadence** (include which functional groups are expected to show mortality or decadence):
-

14. **Average percent litter cover (%) and depth (in):**
-

15. **Expected annual annual-production** (this is TOTAL above-ground annual-production, not just forage annual-production):
-

16. **Potential invasive (including noxious) species (native and non-native).** List species which BOTH characterize degraded states and have the potential to become a dominant or co-dominant species on the ecological site if their future establishment and growth is not actively controlled by management interventions. Species that become dominant for only one to several years (e.g., short-term response to drought or wildfire) are not invasive plants. Note that unlike other indicators, we are describing what is NOT expected in the reference state for the ecological site:
-

17. **Perennial plant reproductive capability:**
-



0 1 2 Miles
 Map Center:
 Lat/Long: 32.634789, -104.102353

NAD 1983 UTM Zone 13N
 Date: May 29/22



New Mexico Geology
Onyx 29 CTB 1

FIGURE:

G

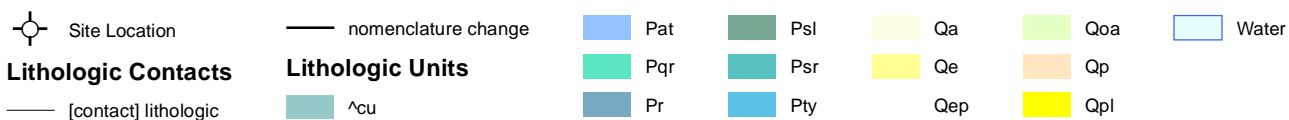
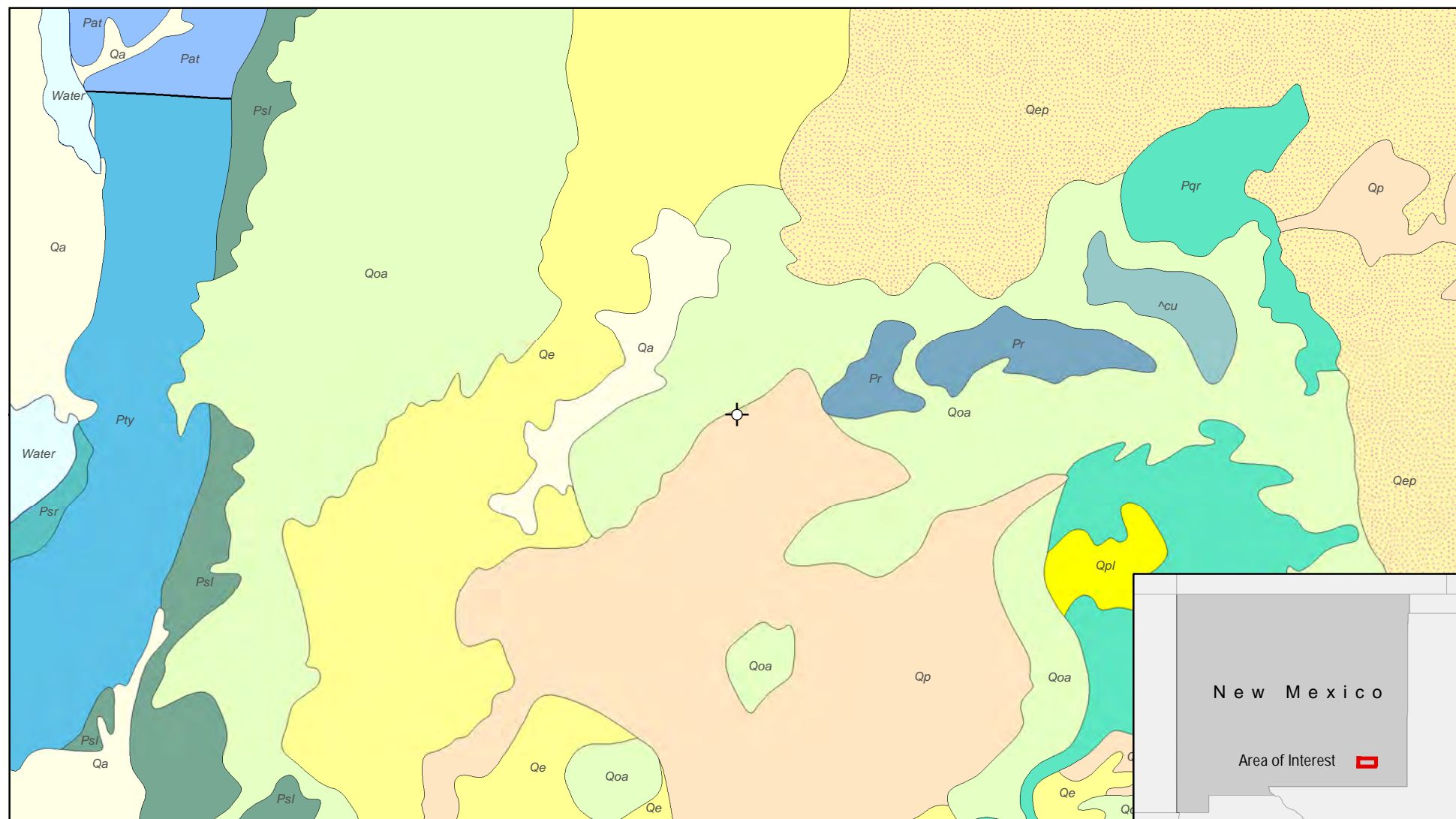


Geospatial data presented in this figure may be derived from external sources and Vertex does not assume any liability for inaccuracies. This figure is intended for reference use only and is not certified for legal, survey, or engineering purposes.

Note: Geology data sourced from New Mexico Bureau of Geology & Mineral Resources, Bureau of Land Management.

VERSATILITY. EXPERTISE.

Document Path: G:\Projects\Devon Energy Corporation\2022\2E-01720 - Onyx 29 CTB 1\Figure G Geology (Onyx 29 CTB 1).mxd



0 1 2 Miles
 Map Center:
 Lat/Long: 32.634789, -104.102353

NAD 1983 UTM Zone 13N
 Date: May 29/22



New Mexico Geology
Onyx 29 CTB 1

FIGURE:

G

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: Geology data sourced from New Mexico Bureau of Geology & Mineral Resources, Bureau of Land Management.

VERSATILITY. EXPERTISE.

ATTACHMENT 4



Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	5/24/2022
Site Location Name:	Onyx 29 CTB 1	Report Run Date:	5/24/2022 10:13 PM
Client Contact Name:	Wes Matthews	API #:	
Client Contact Phone #:	(575) 748-0176		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	5/24/2022 8:20 AM
Departed Site	5/24/2022 3:00 PM

Field Notes

- 8:41** Arrived on site to delineate release near the separators (nAPP2116441032)
- 11:34** Collected BH22-01 through BH22-12 at surface and 2' for horizontal and vertical delineation.
- 11:35** BH22-02, BH22-03, BH22-06, BH22-08, and BH22-10 are above criteria at 2' and require further vertical delineation. BH22-02, BH22-10, and BH22-12 need to be stepped out.
- 13:58** BH22-02 and BH22-10 are vertically delineated at 4'.
BH22-03 and BH22-08 hit refusal at 5'. BH22-08 is vertically delineated there.
BH22-06 is vertically delineated at 6'

Next Steps & Recommendations

- 1 Continue delineation tomorrow

Daily Site Visit Report



Site Photos

Viewing Direction: Northwest



Release area

Viewing Direction: Northeast



Release area

Viewing Direction: Northeast



Release area

Viewing Direction: Northeast



Sample area for BH22-01



Daily Site Visit Report

Viewing Direction: Northwest



Sample area for BH22-02 through BH22-04

Viewing Direction: Northeast



Sample area for BH22-05 through BH22-07

Viewing Direction: Northeast



Sample area for BH22-08

Viewing Direction: Northeast



Sample area for BH22-09 through BH22-11



Daily Site Visit Report



Daily Site Visit Report



Daily Site Visit Signature

Inspector: Chance Dixon

Signature:

A handwritten signature in black ink, appearing to be 'CD' with a flourish.

Signature



Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	8/15/2022
Site Location Name:	Onyx 29 CTB 1	Report Run Date:	8/15/2022 10:06 PM
Client Contact Name:	Wes Matthews	API #:	
Client Contact Phone #:	(575) 748-0176		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	8/15/2022 8:15 AM
Departed Site	8/15/2022 2:30 PM

Field Notes

- 11:21** Arrived on site to continue excavation and confirmation sampling.
- 11:22** Collected BES22-15 through BES22-22 and WES22-26 through WES22-32 on the west trench.
All are clean on all field screening and will be sent to lab for analysis.
- 11:47** Contractors are beginning to connect the excavations where the underground lines are. They are marking 2' away with the excavator.
The rest will need to be done by hand
- 12:25** Brice with Devon was on site earlier.
We discussed how to address the wall against the separator that is still hot.
He said it was okay to scratch at it by hand when the hand crew is able to get out here and get more samples.
- 12:26** Collected WES22-33 and WES22-34 at the west side of the 6' excavation near the underground water line.
Samples are clean on all field screening at 2' and 4'
- 12:29** All clean samples will be sent to lab for analysis
- 13:57** BES22-14 was collected at 8'. Clean on all field screening.

Next Steps & Recommendations

Daily Site Visit Report

1 Send samples to lab for analysis





Daily Site Visit Report

Site Photos

Viewing Direction: Southwest



Sample area for BES22-15 through BES22-18

Viewing Direction: Northwest



Sample area for WES22-33 and WES22-34

Viewing Direction: East



Sample area for BES22-14

Viewing Direction: South



Excavation has Gina up to 2' away from the underground water line. The rest will be done by hand



Daily Site Visit Report

Viewing Direction: Southwest



Sample area for BES22-19 through BES22-20

Viewing Direction: Southwest



Sample area for BES22-21 through BES22-22

Viewing Direction: South



Sample area for WES22-29

Viewing Direction: Southwest



Sample area for WES22-31 through WES22-32



Daily Site Visit Report

Viewing Direction: Northeast



Sample area for WES22-30

Viewing Direction: Northeast



Sample area for WES22-26 through WES22-28

Viewing Direction: Northwest



Underground line is being marked 2' away to excavate

Viewing Direction: South



Marked 2' away from the underground line per Chad's instruction

Daily Site Visit Report



Daily Site Visit Signature

Inspector: Chance Dixon

A handwritten signature in black ink, appearing to be 'CD'.

Signature:

Signature



Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	9/8/2022
Site Location Name:	Onyx 29 CTB 1	Report Run Date:	9/8/2022 5:16 PM
Client Contact Name:	Wes Matthews	API #:	
Client Contact Phone #:	(575) 748-0176		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	9/8/2022 8:45 AM
Departed Site	9/8/2022 10:00 AM

Field Notes

8:53 Arrived on site to record backfill for phase 1.

8:53 Phase 1 is completely backfilled and should be ready for closure.

Next Steps & Recommendations

1 Complete closure report and submit to client

Daily Site Visit Report



Site Photos

Viewing Direction: Northeast



Phase 1 backfilled. Southwest side

Viewing Direction: North



Middle of phase 1 backfilled

Viewing Direction: Northeast



Hand excavation of phase 1 between the oil tanks and separator backfilled

Viewing Direction: East



Hand excavation backfilled



Daily Site Visit Report

Viewing Direction: Southeast



Hand excavation backfilled

Viewing Direction: Northwest



East side of phase 1 backfilled

Daily Site Visit Report



Daily Site Visit Signature

Inspector: Chance Dixon

Signature:

A handwritten signature in black ink, appearing to be 'CD' or similar initials, written over a horizontal line.

Signature



Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	8/29/2022
Site Location Name:	Onyx 29 CTB 1	Report Run Date:	8/29/2022 9:06 PM
Client Contact Name:	Wes Matthews	API #:	
Client Contact Phone #:	(575) 748-0176		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	8/29/2022 9:30 AM
Departed Site	8/29/2022 1:30 PM

Field Notes

- 11:40** Arrived on site to begin confirmation sampling for phase 2
- 11:41** Collected BES22-01 through BES22-03 and WES22-01 through WES22-08 in the 1' hand excavation around the heater treater. All were clean on all field screening and will be sent to lab.
- 11:42** BES22-03 and WES22-05 through WES22-08 were collected in the small 4' excavation that was hot during delineation.

Next Steps & Recommendations

- 1 Continue confirmation tomorrow when the excavation is further

Daily Site Visit Report



Site Photos

Viewing Direction: Northeast



Descriptive Photo - 1
Viewing Direction: Northeast
Desc: Sample area for WES22-01 and WES22-02 under pipelines
Created: 8/29/2022 12:33:12 PM
Lat:32.634791, Long:-104.101666

Sample area for WES22-01 and WES22-02 under pipelines

Viewing Direction: Northeast



Descriptive Photo - 2
Viewing Direction: Northeast
Desc: Sample area for WES22-03
Created: 8/29/2022 12:33:32 PM
Lat:32.634876, Long:-104.101766

Sample area for WES22-03

Viewing Direction: Southeast



Descriptive Photo - 3
Viewing Direction: Southeast
Desc: Sample area for WES22-04
Created: 8/29/2022 12:35:54 PM
Lat:32.634814, Long:-104.101711

Sample area for WES22-04

Viewing Direction: Northeast



Descriptive Photo - 4
Viewing Direction: Northeast
Desc: Sample area for BES22-01
Created: 8/29/2022 12:34:19 PM
Lat:32.634814, Long:-104.101710

Sample area for BES22-01



Daily Site Visit Report

Viewing Direction: Southeast



Sample area for BES22-02

Viewing Direction: Northwest



Sample area for BES22-03 and WES22-05 through WES22-08

Viewing Direction: North



Current excavation and sample area

Daily Site Visit Report



Daily Site Visit Signature

Inspector: Chance Dixon

Signature: 
Signature



Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	8/30/2022
Site Location Name:	Onyx 29 CTB 1	Report Run Date:	8/30/2022 10:32 PM
Client Contact Name:	Wes Matthews	API #:	
Client Contact Phone #:	(575) 748-0176		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	8/30/2022 10:00 AM
Departed Site	8/30/2022 3:00 PM

Field Notes

- 12:56** Arrived on site to continue confirmation for phase 2.
- 10:21** Operator is still working to excavate the marked area. Will wait to grab samples when he is further ahead and I can get in safely
- 11:35** Another 480v line was discovered during excavation.
It was just west of the lines that were marked. This one was not marked. It was not struck, just uncovered. One call is up to date and Devon rep has been notified.
Line is sleeved with 3" schedule 80 PVC
- 13:33** Brice with Devon is on site to check the status of the excavation
- 13:37** Collected WES22-09 through WES22-12 and BES22-04 through BES22-07 in the 2' excavation west of the heater treater.
All except BES22-04 are clean on all field screening. It will be excavated down to 4'
- 13:45** All clean samples have been jarred and put on ice to send to lab

Next Steps & Recommendations

- 1 Continue excavation and confirmation sampling tomorrow

Daily Site Visit Report



Site Photos

Viewing Direction: North



Electric line discovered

Viewing Direction: West



Electric line discovered

Viewing Direction: Southwest



Sample area for BES22-04 through BES22-07

Viewing Direction: Southwest



Sample area for BES22-04 to be excavated down



Daily Site Visit Report

Viewing Direction: Southwest



Sample area for WES22-10 and WES22-12

Viewing Direction: Northwest



Sample area for WES22-09 and WES22-11

Viewing Direction: Northwest



Excavation has been fenced in and will be closed at the end of the day

Viewing Direction: Southwest



Current excavation

Daily Site Visit Report



Daily Site Visit Signature

Inspector: Chance Dixon

Signature:

A handwritten signature in black ink, consisting of the letters 'C' and 'D' joined together.

Signature



Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	8/31/2022
Site Location Name:	Onyx 29 CTB 1	Report Run Date:	8/31/2022 8:17 PM
Client Contact Name:	Wes Matthews	API #:	
Client Contact Phone #:	(575) 748-0176		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	8/31/2022 8:50 AM
Departed Site	8/31/2022 12:00 PM

Field Notes

- 10:30** Arrived on site to continue confirmation sampling.
- 10:31** Collected WES22-13 through WES22-17 and BES22-08 through BES22-11 in the trench trending to the west.
All are clean on all field screening and ready to send to lab
- 10:32** Collected BES22-04 at 4', WES22-09, and WES22-18 through WES22-21 for the walls inside the excavation near the heater treater.
This was to ensure contaminants did not migrate from BES22-04.
All samples are clean on all field screening.

Next Steps & Recommendations

- 1 Send samples to lab for analysis

Daily Site Visit Report



Site Photos

Viewing Direction: Northeast



Descriptive Photo - 1
Viewing Direction: Northeast
Desc: Sample area for BES22-04, WES22-09, and WES22-18 through WES22-20
Created: 8/31/2022 10:23:01 AM
Lat:32.534807, Long:-104.101887

Sample area for BES22-04, WES22-09, and WES22-18 through WES22-20

Viewing Direction: East



Descriptive Photo - 2
Viewing Direction: East
Desc: Sample area for WES22-21
Created: 8/31/2022 10:24:17 AM
Lat:32.534806, Long:-104.101752

Sample area for WES22-21

Viewing Direction: West



Descriptive Photo - 3
Viewing Direction: West
Desc: Sample area for BES22-08 through BES22-11
Created: 8/31/2022 10:24:43 AM
Lat:32.534816, Long:-104.101888

Sample area for BES22-08 through BES22-11

Viewing Direction: Northwest



Descriptive Photo - 4
Viewing Direction: Northwest
Desc: Sample area for WES22-13 and WES22-15
Created: 8/31/2022 10:25:50 AM
Lat:32.534806, Long:-104.101917

Sample area for WES22-13 and WES22-15



Daily Site Visit Report

Viewing Direction: Southwest



Sample area for WES22-14 and WES22-16

Viewing Direction: West



Sample area for WES22-17

Daily Site Visit Report



Daily Site Visit Signature

Inspector: Chance Dixon

Signature:

A handwritten signature consisting of the letters 'C' and 'D' in a stylized, cursive-like font.

Signature



Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	9/8/2022
Site Location Name:	Onyx 29 CTB 1	Report Run Date:	9/8/2022 5:15 PM
Client Contact Name:	Wes Matthews	API #:	
Client Contact Phone #:	(575) 748-0176		
Unique Project ID		Project Owner:	
Project Reference #		Project Manager:	

Summary of Times

Arrived at Site	9/8/2022 8:45 AM
Departed Site	9/8/2022 10:00 AM

Field Notes

9:16 On site to record backfill for phase 2
9:16 Site is completely backfilled and ready for closure

Next Steps & Recommendations

1 Complete closure report and submit to client

Daily Site Visit Report



Site Photos

Viewing Direction: Northeast



Hand excavation around heater treaters backfilled

Viewing Direction: North



East side of heater treaters backfilled

Viewing Direction: Southeast



Hand excavation around heater treaters completely backfilled

Viewing Direction: West



Phase 2 backfilled



Daily Site Visit Report

Viewing Direction: East



Descriptive Photo: 02
Viewing Direction: East
Date: Phase 2 backfill
Created: 8/8/2022 9:40:51 AM
Lat: 45.534821, Long: -104.104124

Phase 2 backfilled

Daily Site Visit Report



Daily Site Visit Signature

Inspector: Chance Dixon

Signature: 
Signature

ATTACHMENT 5



Dhugal Hanton <vertexresourcegroupusa@gmail.com>

Onyx 29 CTB 1

4 messages

Dhugal Hanton <vertexresourcegroupusa@gmail.com>
To: "Nobui, Jennifer, EMNRD" <Jennifer.Nobui@state.nm.us>
Cc: dale.woodall@dmv.com

Mon, Aug 8, 2022 at 1:36 PM

All,

Please accept this email as notification that Vertex Resource Services has scheduled a sampling event to be conducted at the following releases:

nAPP2116441032 ONYX 29 CTB 1
and
nAPP2213024415 ONYX 29 CTB 1

On Wednesday, August 9, 2022, at approximately 2:00 p.m., Chance Dixon will be on-site to conduct confirmation sampling. The sampling will continue through Friday August 19, 2022. He can be reached at 575-988-1472. If you need directions to the site, please do not hesitate to contact him. If you have any questions regarding this notification, please call Kent Stallings at 346-814-1413.

Thank you,

Kent Stallings P.G.

Project Manager
Vertex Resource Services Inc.
3101 Boyd Drive,
Carlsbad, NM 88220

P 575.725.5001
C 346.814.1413

Dhugal Hanton <vertexresourcegroupusa@gmail.com>
To: "Nobui, Jennifer, EMNRD" <Jennifer.Nobui@state.nm.us>

Fri, Aug 19, 2022 at 8:58 AM

All,

Vertex respectfully requests that confirmation sampling for this location be extended to Friday, August 26, 2022.

If you have any questions or concerns regarding this notification, please call Kent Stallings at 346-814-1413.

Thank you,

Chance Dixon B.Sc.

Senior Environmental Technician

Vertex Resource Services Inc.
3101 Boyd Drive,
Carlsbad, NM 88220

C 575.988.1472

[Quoted text hidden]

Nobui, Jennifer, EMNRD <Jennifer.Nobui@state.nm.us> Fri, Aug 19, 2022 at 9:06 AM
To: Dhugal Hanton <vertexresourcegroupusa@gmail.com>
Cc: "Bratcher, Mike, EMNRD" <mike.bratcher@state.nm.us>, "Hamlet, Robert, EMNRD" <Robert.Hamlet@state.nm.us>, "Harimon, Jocelyn, EMNRD" <Jocelyn.Harimon@state.nm.us>

Chance

Thank you for the notification. Please include a copy of this and all notifications in the remedial and/or closure reports to ensure the notifications are documented in the project file.

Thanks,

Jennifer Nobui

From: Dhugal Hanton <vertexresourcegroupusa@gmail.com>
Sent: Friday, August 19, 2022 8:58 AM
To: Nobui, Jennifer, EMNRD <Jennifer.Nobui@state.nm.us>
Subject: [EXTERNAL] Re: Onyx 29 CTB 1

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

[Quoted text hidden]

Dhugal Hanton <vertexresourcegroupusa@gmail.com> Fri, Aug 26, 2022 at 7:38 AM
To: "Nobui, Jennifer, EMNRD" <Jennifer.Nobui@state.nm.us>

All,

Vertex respectfully requests that confirmation sampling for both of these releases be extended to Friday, September 2, 2022. If you have any questions or concerns, please do not hesitate to contact us.

Thank you,

Chance Dixon B.Sc.
Senior Environmental Technician

Vertex Resource Services Inc.
3101 Boyd Drive,
Carlsbad, NM 88220

C 575.988.1472

[Quoted text hidden]

ATTACHMENT 6

Client Name: Devon Energy Production Company

Site Name: Onyx 29 CTB 1

NMOCD Tracking #: nAPP2213024415

Project #: 22E-01720-01

Lab Report: 2205A92

Table 2. Initial Characterization Sample Field Screen and Laboratory Results - Depth to Groundwater <50 feet bgs													
Sample Description			Field Screening			Petroleum Hydrocarbons							Inorganic
Sample ID	Depth (ft)	Sample Date	Volatile Organic Compounds (PID)	Extractable Organic Compounds (PetroFlag)	Chloride Concentration	Volatile		Extractable					
						Benzene	BTEX (Total)	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)	Motor Oil Range Organics (MRO)	(GRO + DRO)	Total Petroleum Hydrocarbons (TPH)	
			(ppm)	(ppm)	(ppm)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	
BH22-01	0	5/23/2022	0	23	540	ND	ND	ND	ND	ND	ND	ND	ND
BH22-01	2	5/23/2022	0	20	202	-	-	-	-	-	-	-	-
BH22-02	0	5/23/2022	0	101	537	ND	ND	ND	ND	ND	ND	ND	200
BH22-02	2	5/23/2022	0	24	320	-	-	-	-	-	-	-	-
BH22-03	0	5/23/2022	0	104	6,795	ND	ND	ND	ND	ND	ND	ND	45000
BH22-03	2	5/23/2022	0	80	537	ND	ND	ND	ND	ND	ND	ND	550
BH22-03	4	5/23/2022	0	35	195	-	-	-	-	-	-	-	-
BH22-04	0	5/23/2022	0	35	542	ND	ND	ND	ND	ND	ND	ND	110
BH22-04	2	5/23/2022	0	41	292	-	-	-	-	-	-	-	-
BH22-05	0	5/23/2022	0	41	542	ND	ND	ND	ND	ND	ND	ND	1400
BH22-05	2	5/23/2022	0	14	280	-	-	-	-	-	-	-	-
BH22-06	0	5/23/2022	0	55	5,298	ND	ND	ND	ND	ND	ND	ND	7700
BH22-06	2	5/23/2022	0	47	550	ND	ND	ND	ND	ND	ND	ND	730
BH22-06	4	5/23/2022	0	30	312	-	-	-	-	-	-	-	-
BH22-07	0	5/23/2022	0	38	397	ND	ND	ND	ND	ND	ND	ND	89
BH22-07	2	5/23/2022	0	31	490	-	-	-	-	-	-	-	-
BH22-08	0	5/23/2022	0	102	590	ND	ND	ND	15	ND	15	15	ND
BH22-08	2	5/23/2022	0	33	295	-	-	-	-	-	-	-	-

"ND" Not Detected at the Reporting Limit

"- " indicates not analyzed/assessed

Bold and grey shaded indicates exceedance outside of NMOCD Closure Criteria (on-pad)

Client Name: Devon Energy Production Company

Site Name: Onyx 29 CTB 1 (Phase 1)

NM OCD Tracking #: nAPP2213024415

Project #: 22E-01720-001

Lab Report(sX): 2208802, 2208875, 2208917, 2208A05, 2208A84, 2208A82, 2208C61

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

Table 3. Confirmatory Sample Field Screen and Laboratory Results - Depth to Groundwater <50 feet bgs													
Sample Description			Field Screening			Petroleum Hydrocarbons							Inorganic
Sample ID	Depth (ft)	Sample Date	Volatile Organic Compounds (PID)	Extractable Organic Compounds (PetroFlag)	Chloride Concentration	Volatile		Extractable					
						Benzene	BTEX (Total)	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)	Motor Oil Range Organics (MRO)	(GRO + DRO)	Total Petroleum Hydrocarbons (TPH)	
			(ppm)	(ppm)	(ppm)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	
BES22-01	4	8/17/2022	0	-	540	ND	ND	ND	ND	ND	ND	ND	ND
BES22-02	5	8/17/2022	0	-	410	ND	ND	ND	ND	ND	ND	ND	ND
BES22-03	4	8/10/2022	0	-	-	ND	ND	ND	ND	ND	ND	ND	210
BES22-04	4	8/9/2022	0	50	290	ND	ND	ND	ND	ND	ND	ND	130
BES22-05	5	8/17/2022	0	-	421	ND	ND	ND	ND	ND	ND	ND	ND
BES22-06	4	8/17/2022	0	-	473	ND	ND	ND	ND	ND	ND	ND	ND
BES22-07	4	8/17/2022	0	-	398	ND	ND	ND	ND	ND	ND	ND	ND
BES22-08	2	8/10/2022	-	-	-	ND	ND	ND	ND	ND	ND	ND	89
BES22-09	8	8/18/2022	0	-	378	ND	ND	ND	ND	ND	ND	ND	ND
BES22-10	8	8/18/2022	0	-	243	ND	ND	ND	ND	ND	ND	ND	ND
BES22-11	6	8/11/2022	0	103	382	ND	ND	ND	ND	ND	ND	ND	110
BES22-12	6	8/11/2022	0	96	475	ND	ND	ND	ND	ND	ND	ND	ND
BES22-13	6	8/11/2022	0	46	330	ND	ND	ND	ND	ND	ND	ND	97
BES22-14	8	8/15/2022	0	88	456	ND	ND	ND	ND	ND	ND	ND	80
BES22-15	4	8/15/2022	0	26	405	ND	ND	ND	ND	ND	ND	ND	200
BES22-16	4	8/15/2022	0	41	355	ND	ND	ND	ND	ND	ND	ND	460
BES22-17	4	8/15/2022	0	63	257	ND	ND	ND	ND	ND	ND	ND	83
BES22-18	4	8/15/2022	0	28	280	ND	ND	ND	ND	ND	ND	ND	64
BES22-19	4	8/15/2022	0	30	637	ND	ND	ND	ND	ND	ND	ND	260
BES22-20	4	8/15/2022	0	34	347	ND	ND	ND	ND	ND	ND	ND	130
BES22-21	4	8/15/2022	0	18	345	ND	ND	ND	ND	ND	ND	ND	85
BES22-22	4	8/15/2022	0	10	342	ND	ND	ND	ND	ND	ND	ND	110
BES22-23	1	8/26/2022	0	55	550	ND	ND	ND	ND	ND	ND	ND	ND
WES22-03	1	8/10/2022	-	-	-	ND	ND	ND	ND	ND	ND	ND	520
WES22-04	2	8/10/2022	-	-	-	ND	ND	ND	ND	ND	ND	ND	450
WES22-05	2	8/10/2022	-	-	-	ND	ND	ND	ND	ND	ND	ND	87
WES22-12	2	8/11/2022	0	28	550	ND	ND	ND	ND	ND	ND	ND	ND
WES22-12	4	8/11/2022	0	46	512	ND	ND	ND	ND	ND	ND	ND	190
WES22-13	2	8/11/2022	0	28	335	ND	ND	ND	ND	ND	ND	ND	ND
WES22-13	4	8/11/2022	0	16	307	ND	ND	ND	ND	ND	ND	ND	ND
WES22-14	2	8/11/2022	0	74	602	ND	ND	ND	ND	ND	ND	ND	160
WES22-14	4	8/11/2022	0	33	545	ND	ND	ND	ND	ND	ND	ND	170
WES22-15	2	8/11/2022	0	39	435	ND	ND	ND	ND	ND	ND	ND	ND
WES22-15	4	8/11/2022	0	46	205	ND	ND	ND	ND	ND	ND	ND	ND
WES22-16	2	8/11/2022	0	60	479	ND	ND	ND	ND	ND	ND	ND	ND
WES22-16	4	8/11/2022	0	70	591	ND	ND	ND	ND	ND	ND	ND	100
WES22-17	2	8/11/2022	0	95	281	ND	ND	ND	ND	ND	ND	ND	ND
WES22-17	4	8/11/2022	0	110	270	ND	ND	ND	ND	ND	ND	ND	ND
WES22-19	2	8/12/2022	0	49	467	ND	ND	ND	ND	ND	ND	ND	140
WES22-21	2	8/12/2022	0	93	350	ND	ND	ND	ND	ND	ND	ND	100
WES22-25	2	8/12/2022	0	39	275	ND	ND	ND	ND	ND	ND	ND	120
WES22-26	2	8/15/2022	0	-	322	ND	ND	ND	ND	ND	ND	ND	140
WES22-27	2	8/15/2022	0	-	565	ND	ND	ND	ND	ND	ND	ND	68
WES22-28	2	8/15/2022	0	-	397	ND	ND	ND	ND	ND	ND	ND	ND
WES22-29	2	8/15/2022	0	-	375	ND	ND	ND	ND	ND	ND	ND	ND
WES22-30	2	8/15/2022	0	-	395	ND	ND	ND	ND	ND	ND	ND	150
WES22-31	2	8/15/2022	0	-	377	ND	ND	ND	ND	ND	ND	ND	71
WES22-32	2	8/15/2022	0	-	370	ND	ND	ND	ND	ND	ND	ND	120
WES22-33	2	8/15/2022	0	-	462	ND	ND	ND	ND	ND	ND	ND	ND
WES22-33	4	8/15/2022	0	-	409	ND	ND	ND	ND	ND	ND	ND	ND
WES22-34	2	8/15/2022	0	-	395	ND	ND	ND	ND	ND	ND	ND	ND
WES22-34	4	8/15/2022	0	-	356	ND	ND	ND	ND	ND	ND	ND	ND

WES22-35	2	8/16/2022	0	-	428	ND	ND	ND	ND	ND	ND	ND	ND
WES22-36	1	8/16/2022	0	-	582	ND	ND	ND	ND	ND	ND	ND	ND
WES22-37	1	8/16/2022	0	-	572	ND	ND	ND	ND	ND	ND	ND	ND
WES22-38	2	8/16/2022	0	-	1,258	ND	ND	ND	ND	ND	ND	ND	190
WES22-40	2	8/16/2022	0	-	385	ND	ND	ND	ND	ND	ND	ND	220
WES22-41	2	8/17/2022	0	-	272	ND	ND	ND	ND	ND	ND	ND	ND
WES22-42	2	8/17/2022	0	-	482	ND	ND	ND	ND	ND	ND	ND	ND
WES22-43	2	8/17/2022	0	-	395	ND	ND	ND	ND	ND	ND	ND	ND
WES22-44	2	8/17/2022	0	-	214	ND	ND	ND	ND	ND	ND	ND	ND
WES22-45	3	8/26/2022	0	29	345	ND	ND	ND	ND	ND	ND	ND	ND
WES22-46	3	8/26/2022	0	74	310	ND	ND	ND	ND	ND	ND	ND	ND
WES22-47	3	8/26/2022	0	9	315	ND	ND	ND	ND	ND	ND	ND	ND
WES22-48	3	8/26/2022	0	33	361	ND	ND	ND	ND	ND	ND	ND	ND
WES22-49	1	8/26/2022	0	23	425	ND	ND	ND	ND	ND	ND	ND	ND
WES22-50	0.5	8/26/2022	0	93	452	ND	ND	ND	ND	ND	ND	ND	ND

"ND" Not Detected at the Reporting Limit

"-" indicates not analyzed/assessed

Bold and grey shaded indicates exceedance outside of NM OCD Closure Criteria (on-pad)

Client Name: Devon Energy Production Company

Site Name: Onyx 29 CTB 1 (Phase 1)

NM OCD Tracking #: nAPP2213024415

Project #: 22E-01720-001

Lab Report(sX): 2208802, 2208875, 2208917, 2208A05, 2208A84, 2208A82, 2208C61

Table 4. Excavation Field Screen and Laboratory Results - Depth to Groundwater <50 feet bgs

Table 4. Excavation Field Screen and Laboratory Results - Depth to Groundwater <50 feet bgs													
Sample Description			Field Screening			Petroleum Hydrocarbons							Inorganic
Sample ID	Depth (ft)	Sample Date	Volatile Organic Compounds (PID)	Extractable Organic Compounds (PetroFlag)	Chloride Concentration	Volatile		Extractable					
						Benzene (mg/kg)	BTEX (Total) (mg/kg)	Gasoline Range Organics (GRO) (mg/kg)	Diesel Range Organics (DRO) (mg/kg)	Motor Oil Range Organics (MRO) (mg/kg)	(GRO + DRO) (mg/kg)	Total Petroleum Hydrocarbons (TPH) (mg/kg)	
BES22-01	2	8/4/2022	0	27	587	-	-	-	-	-	-	-	-
BES22-01	2	8/10/2022	-	-	-	ND	ND	ND	ND	ND	ND	ND	760
BES22-01	4	8/17/2022	0	-	540	ND	ND	ND	ND	ND	ND	ND	ND
BES22-02	2	8/4/2022	0	32	480	-	-	-	-	-	-	-	-
BES22-02	4	8/10/2022	-	-	-	ND	ND	ND	ND	ND	ND	ND	620
BES22-02	5	8/17/2022	0	-	410	ND	ND	ND	ND	ND	ND	ND	ND
BES22-03	2	8/8/2022	0	-	3,940	-	-	-	-	-	-	-	-
BES22-03	4	8/8/2022	0	37	155	-	-	-	-	-	-	-	-
BES22-03	4	8/10/2022	0	-	-	ND	ND	ND	ND	ND	ND	ND	210
BES22-04	2	8/8/2022	0	-	2,367	-	-	-	-	-	-	-	-
BES22-04	4	8/9/2022	0	50	290	ND	ND	ND	ND	ND	ND	ND	130
BES22-05	2	8/8/2022	0	-	2,613	-	-	-	-	-	-	-	-
BES22-05	4	8/8/2022	0	83	477	-	-	-	-	-	-	-	-
BES22-05	4	8/10/2022	-	-	-	ND	ND	ND	ND	ND	ND	ND	1200
BES22-05	5	8/17/2022	0	-	421	ND	ND	ND	ND	ND	ND	ND	ND
BES22-06	2	8/8/2022	0	64	362								
BES22-06	2	8/10/2022	-	-	-	ND	ND	ND	ND	ND	ND	ND	810
BES22-06	4	8/17/2022	0	-	473	ND	ND	ND	ND	ND	ND	ND	ND
BES22-07	2	8/8/2022	0	66	125	-	-	-	-	-	-	-	-
BES22-07	2	8/10/2022	-	-	-	ND	ND	ND	ND	ND	ND	ND	970
BES22-07	4	8/17/2022	0	-	398	ND	ND	ND	ND	ND	ND	ND	ND
BES22-08	2	8/8/2022	0	25	508	-	-	-	-	-	-	-	-
BES22-08	2	8/10/2022	-	-	-	ND	ND	ND	ND	ND	ND	ND	89
BES22-09	6	8/11/2022	0	29	595	ND	ND	ND	25	ND	25	25	1600
BES22-09	8	8/18/2022	0	-	378	ND	ND	ND	ND	ND	ND	ND	ND
BES22-10	6	8/11/2022	0	51	610	ND	ND	ND	100	62	100	162	1800
BES22-10	8	8/18/2022	0	-	243	ND	ND	ND	ND	ND	ND	ND	ND
BES22-11	6	8/11/2022	0	103	382	ND	ND	ND	ND	ND	ND	ND	110
BES22-12	6	8/11/2022	0	96	475	ND	ND	ND	ND	ND	ND	ND	ND
BES22-13	6	8/11/2022	0	46	330	ND	ND	ND	ND	ND	ND	ND	97
BES22-14	6	8/11/2022	0	-	2,170	-	-	-	-	-	-	-	-
BES22-14	8	8/15/2022	0	88	456	ND	ND	ND	ND	ND	ND	ND	80
BES22-15	4	8/15/2022	0	26	405	ND	ND	ND	ND	ND	ND	ND	200
BES22-16	4	8/15/2022	0	41	355	ND	ND	ND	ND	ND	ND	ND	460
BES22-17	4	8/15/2022	0	63	257	ND	ND	ND	ND	ND	ND	ND	83
BES22-18	4	8/15/2022	0	28	280	ND	ND	ND	ND	ND	ND	ND	64
BES22-19	4	8/15/2022	0	30	637	ND	ND	ND	ND	ND	ND	ND	260
BES22-20	4	8/15/2022	0	34	347	ND	ND	ND	ND	ND	ND	ND	130
BES22-21	4	8/15/2022	0	18	345	ND	ND	ND	ND	ND	ND	ND	85
BES22-22	4	8/15/2022	0	10	342	ND	ND	ND	ND	ND	ND	ND	110
BES22-23	1	8/26/2022	0	55	550	ND	ND	ND	ND	ND	ND	ND	ND
WES22-01	1	8/4/2022	0	88	220	-	-	-	-	-	-	-	-
WES22-01	1	8/10/2022	-	-	-	ND	ND	ND	ND	ND	ND	ND	1300
WES22-02	1	8/4/2022	0	41	225	-	-	-	-	-	-	-	-
WES22-02	1	8/10/2022	-	-	-	ND	ND	ND	ND	ND	ND	ND	760
WES22-03	1	8/4/2022	0	68	280	-	-	-	-	-	-	-	-
WES22-03	1	8/10/2022	-	-	-	ND	ND	ND	ND	ND	ND	ND	520
WES22-04	1	8/4/2022	0	55	277	-	-	-	-	-	-	-	-
WES22-04	2	8/10/2022	-	-	-	ND	ND	ND	ND	ND	ND	ND	450
WES22-05	1	8/4/2022	0	35	346	-	-	-	-	-	-	-	-
WES22-05	2	8/10/2022	-	-	-	ND	ND	ND	ND	ND	ND	ND	87
WES22-06	1	8/8/2022	0	-	8,345	-	-	-	-	-	-	-	-

WES22-07	1	8/8/2022	0	76	45	-	-	-	-	-	-	-	-
WES22-07	2	8/10/2022	-	-	-	ND	ND	ND	ND	ND	ND	ND	2800
WES22-08	1	8/8/2022	0	-	1,380	-	-	-	-	-	-	-	-
WES22-09	1	8/8/2022	0	90	445	-	-	-	-	-	-	-	-
WES22-09	1	8/10/2022	-	-	-	ND	ND	ND	ND	ND	ND	ND	760
WES22-10	1	8/8/2022	0	-	7,292	-	-	-	-	-	-	-	-
WES22-11	1	8/8/2022	0	0	263	-	-	-	-	-	-	-	-
WES22-11	1	8/10/2022	-	-	-	ND	ND	ND	ND	ND	ND	ND	1100
WES22-12	2	8/11/2022	0	28	550	ND	ND	ND	ND	ND	ND	ND	ND
WES22-12	4	8/11/2022	0	46	512	ND	ND	ND	ND	ND	ND	ND	190
WES22-13	2	8/11/2022	0	28	335	ND	ND	ND	ND	ND	ND	ND	ND
WES22-13	4	8/11/2022	0	16	307	ND	ND	ND	ND	ND	ND	ND	ND
WES22-14	2	8/11/2022	0	74	602	ND	ND	ND	ND	ND	ND	ND	160
WES22-14	4	8/11/2022	0	33	545	ND	ND	ND	ND	ND	ND	ND	170
WES22-15	2	8/11/2022	0	39	435	ND	ND	ND	ND	ND	ND	ND	ND
WES22-15	4	8/11/2022	0	46	205	ND	ND	ND	ND	ND	ND	ND	ND
WES22-16	2	8/11/2022	0	60	479	ND	ND	ND	ND	ND	ND	ND	ND
WES22-16	4	8/11/2022	0	70	591	ND	ND	ND	ND	ND	ND	ND	100
WES22-17	2	8/11/2022	0	95	281	ND	ND	ND	ND	ND	ND	ND	ND
WES22-17	4	8/11/2022	0	110	270	ND	ND	ND	ND	ND	ND	ND	ND
WES22-18	2	8/12/2022	0	-	1,487	-	-	-	-	-	-	-	-
WES22-19	2	8/12/2022	0	49	467	ND	ND	ND	ND	ND	ND	ND	140
WES22-20	2	8/12/2022	0	-	1,357	-	-	-	-	-	-	-	-
WES22-21	2	8/12/2022	0	93	350	ND	ND	ND	ND	ND	ND	ND	100
WES22-22	2	8/12/2022	0	-	1,505	-	-	-	-	-	-	-	-
WES22-23	2	8/12/2022	0	-	925	-	-	-	-	-	-	-	-
WES22-24	2	8/12/2022	0	-	1,147	-	-	-	-	-	-	-	-
WES22-25	2	8/12/2022	0	39	275	ND	ND	ND	ND	ND	ND	ND	120
WES22-26	2	8/15/2022	0	-	322	ND	ND	ND	ND	ND	ND	ND	140
WES22-27	2	8/15/2022	0	-	565	ND	ND	ND	ND	ND	ND	ND	68
WES22-28	2	8/15/2022	0	-	397	ND	ND	ND	ND	ND	ND	ND	ND
WES22-29	2	8/15/2022	0	-	375	ND	ND	ND	ND	ND	ND	ND	ND
WES22-30	2	8/15/2022	0	-	395	ND	ND	ND	ND	ND	ND	ND	150
WES22-31	2	8/15/2022	0	-	377	ND	ND	ND	ND	ND	ND	ND	71
WES22-32	2	8/15/2022	0	-	370	ND	ND	ND	ND	ND	ND	ND	120
WES22-33	2	8/15/2022	0	-	462	ND	ND	ND	ND	ND	ND	ND	ND
WES22-33	4	8/15/2022	0	-	409	ND	ND	ND	ND	ND	ND	ND	ND
WES22-34	2	8/15/2022	0	-	395	ND	ND	ND	ND	ND	ND	ND	ND
WES22-34	4	8/15/2022	0	-	356	ND	ND	ND	ND	ND	ND	ND	ND
WES22-35	2	8/16/2022	0	-	428	ND	ND	ND	ND	ND	ND	ND	ND
WES22-36	1	8/16/2022	0	-	582	ND	ND	ND	ND	ND	ND	ND	ND
WES22-37	1	8/16/2022	0	-	572	ND	ND	ND	19	ND	19	19	ND
WES22-38	2	8/16/2022	0	-	1,258	ND	ND	ND	ND	ND	ND	ND	190
WES22-39	2	8/16/2022	0	-	1,595	-	-	-	-	-	-	-	-
WES22-40	2	8/16/2022	0	-	385	ND	ND	ND	ND	ND	ND	ND	220
WES22-41	2	8/17/2022	0	-	272	ND	ND	ND	ND	ND	ND	ND	ND
WES22-42	2	8/17/2022	0	-	482	ND	ND	ND	ND	ND	ND	ND	ND
WES22-43	2	8/17/2022	0	-	395	ND	ND	ND	ND	ND	ND	ND	ND
WES22-44	2	8/17/2022	0	-	214	ND	ND	ND	ND	ND	ND	ND	ND
WES22-45	3	8/26/2022	0	29	345	ND	ND	ND	ND	ND	ND	ND	ND
WES22-46	3	8/26/2022	0	74	310	ND	ND	ND	ND	ND	ND	ND	ND
WES22-47	3	8/26/2022	0	9	315	ND	ND	ND	ND	ND	ND	ND	ND
WES22-48	3	8/26/2022	0	33	361	ND	ND	ND	ND	ND	ND	ND	ND
WES22-49	1	8/26/2022	0	23	425	ND	ND	ND	ND	ND	ND	ND	ND
WES22-50	0.5	8/26/2022	0	93	452	ND	ND	ND	ND	ND	ND	ND	ND

"ND" Not Detected at the Reporting Limit

"-" indicates not analyzed/assessed

Bold and grey shaded indicates exceedance outside of NM OCD Closure Criteria (on-pad)

Client Name: Devon Energy Production Company
 Site Name: Onyx 29 CTB 1
 NMOCD Tracking #: nAPP2116441032
 Project #: 22E-01720-02
 Lab Reports: 2205B74, 2205C48

Sample Description			Field Screening			Petroleum Hydrocarbons							Inorganic
Sample ID	Depth (ft)	Sample Date	Volatile Organic Compounds (PID)	Extractable Organic Compounds (PetroFlag)	Chloride Concentration	Volatile		Extractable					
						Benzene	BTEX (Total)	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)	Motor Oil Range Organics (MRO)	(GRO + DRO)	Total Petroleum Hydrocarbons (TPH)	
			(ppm)	(ppm)	(ppm)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
BH22-01	0	5/24/2022	0	34	325	ND	ND	ND	20	ND	20	20	ND
BH22-01	2	5/24/2022	0	18	317	-	-	-	-	-	-	-	-
BH22-02	0	5/24/2022	0	37	3,362	ND	ND	ND	ND	ND	ND	ND	5400
BH22-02	2	5/24/2022	0	24	2,637	ND	ND	ND	ND	ND	ND	ND	2700
BH22-02	4	5/24/2022	0	36	360	ND	ND	ND	ND	ND	ND	ND	260
BH22-03	0	5/24/2022	0	2,000	4,560	ND	ND	ND	4100	2400	4100	6500	5500
BH22-03	2	5/24/2022	0	112	4,032	ND	ND	ND	240	140	240	380	3700
BH22-03	4	5/24/2022	0	488	1,467	-	-	-	-	-	-	-	-
BH22-03	5	5/24/2022	0	220	600	ND	ND	ND	480	460	480	940	640
BH22-04	0	5/24/2022	0	37	395	ND	ND	ND	12	ND	12	12	98
BH22-04	2	5/24/2022	0	13	300	-	-	-	-	-	-	-	-
BH22-05	0	5/24/2022	0	11	232	ND	ND	ND	29	ND	29	29	73
BH22-05	2	5/24/2022	0	19	387	-	-	-	-	-	-	-	-
BH22-06	0	5/24/2022	0	68	3,781	ND	ND	ND	17	ND	17	17	5000
BH22-06	2	5/24/2022	0	76	2,337	ND	ND	ND	ND	ND	ND	ND	4500
BH22-06	4	5/24/2022	0	66	817	-	-	-	-	-	-	-	-
BH22-06	6	5/24/2022	0	29	525	ND	ND	ND	ND	ND	ND	ND	120
BH22-07	0	5/24/2022	0	43	480	ND	ND	ND	ND	ND	ND	ND	100
BH22-07	2	5/24/2022	0	67	495	-	-	-	-	-	-	-	-
BH22-08	0	5/24/2022	0	2,000	1,125	ND	ND	ND	7100	4700	7100	11800	1300
BH22-08	2	5/24/2022	0	105	3,855	ND	ND	ND	76	72	76	148	4700
BH22-08	4	5/24/2022	0	102	977	-	-	-	-	-	-	-	-
BH22-08	5	5/24/2022	0	50	600	ND	ND	ND	120	120	120	240	720
BH22-09	0	5/24/2022	0	96	572	ND	ND	ND	16	ND	16	16	370
BH22-09	2	5/24/2022	0	58	477	-	-	-	-	-	-	-	-
BH22-10	0	5/24/2022	0	343	4,280	ND	ND	ND	390	370	390	760	20000
BH22-10	2	5/24/2022	0	123	4,400	ND	ND	ND	49	ND	49	49	7200
BH22-10	3	5/24/2022	0	48	585	ND	ND	ND	ND	ND	ND	ND	430
BH22-11	0	5/24/2022	0	25	370	ND	ND	ND	ND	ND	ND	ND	230
BH22-11	2	5/24/2022	0	14	310	-	-	-	-	-	-	-	-
BH22-12	0	5/24/2022	0	111	2,098	ND	ND	ND	ND	ND	ND	ND	17000
BH22-12	2	5/24/2022	0	17	585	ND	ND	ND	ND	ND	ND	ND	230
BH22-13	0	5/25/2022	0	146	328	ND	ND	ND	31	52	31	83	250
BH22-13	2	5/25/2022	0	28	440	ND	ND	ND	ND	ND	ND	ND	250
BH22-14	0	5/25/2022	0	114	160	ND	ND	ND	23	ND	23	23	70
BH22-14	2	5/25/2022	0	31	415	-	-	-	-	-	-	-	-
BH22-15	0	5/25/2022	0	56	158	ND	ND	ND	ND	ND	ND	ND	120
BH22-15	2	5/25/2022	0	21	180	-	-	-	-	-	-	-	-
BH22-16	0	5/25/2022	0	25	93	ND	ND	ND	ND	ND	ND	ND	ND
BH22-16	2	5/25/2022	0	38	135	-	-	-	-	-	-	-	-
BH22-17	0	5/25/2022	0	38	118	ND	ND	ND	ND	ND	ND	ND	ND
BH22-17	2	5/25/2022	0	6	78	-	-	-	-	-	-	-	-

"ND" Not Detected at the Reporting Limit

"-" indicates not analyzed/assessed

Bold and grey shaded indicates exceedance outside of NMOCD Closure Criteria (on-pad)

Client Name: Devon Energy Production Company
 Site Name: Onyx 29 CTB 1 Phase 2
 NM OCD Tracking #: nAPP2116441032
 Project #: 22E-01720-001
 Lab Report(sX): 2208I02, 2208I67, 2209087

Table 6. Confirmatory Sample Field Screen and Laboratory Results - Depth to Groundwater <50 feet bgs

Table 6. Confirmatory Sample Field Screen and Laboratory Results - Depth to Groundwater <50 feet bgs													
Sample Description			Field Screening			Petroleum Hydrocarbons							Inorganic
Sample ID	Depth (ft)	Sample Date	Volatile Organic Compounds (PID)	Extractable Organic Compounds (PetroFlag)	Chloride Concentration	Volatile		Extractable					
						Benzene	BTEX (Total)	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)	Motor Oil Range Organics (MRO)	(GRO + DRO)	Total Petroleum Hydrocarbons (TPH)	
			(ppm)	(ppm)	(ppm)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	
BES22-01	1	8/29/2022	0	56	529	ND	ND	ND	ND	ND	ND	ND	97
BES22-02	1	8/29/2022	0	69	228	ND	ND	ND	ND	ND	ND	ND	77
BES22-03	4	8/29/2022	0	72	472	ND	ND	ND	ND	ND	ND	ND	110
BES22-04	2	8/30/2022	0	31	3,552	-	-	-	-	-	-	-	-
BES22-04	4	8/31/2022	0	92	372	ND	ND	ND	ND	ND	ND	ND	ND
BES22-05	2	8/30/2022	0	48	547	ND	ND	ND	ND	ND	ND	ND	110
BES22-06	2	8/30/2022	0	27	437	ND	ND	ND	ND	ND	ND	ND	120
BES22-07	2	8/30/2022	0	60	470	ND	ND	ND	ND	ND	ND	ND	110
BES22-08	2	8/31/2022	0	71	480	ND	ND	ND	ND	ND	ND	ND	ND
BES22-09	2	8/31/2022	0	110	375	ND	ND	ND	ND	ND	ND	ND	62
BES22-10	2	8/31/2022	0	102	280	ND	ND	ND	ND	ND	ND	ND	ND
BES22-11	2	8/31/2022	0	34	71	ND	ND	ND	ND	ND	ND	ND	ND
WES22-01	0.5	8/29/2022	0	56	346	ND	ND	ND	ND	ND	ND	ND	110
WES22-02	0.5	8/29/2022	0	41	510	ND	ND	ND	ND	ND	ND	ND	110
WES22-03	0.5	8/29/2022	0	28	469	ND	ND	ND	ND	ND	ND	ND	190
WES22-04	0.5	8/29/2022	0	26	425	ND	ND	ND	ND	ND	ND	ND	170
WES22-05	2	8/29/2022	0	61	367	ND	ND	ND	ND	ND	ND	ND	150
WES22-06	2	8/29/2022	0	90	257	ND	ND	ND	ND	ND	ND	ND	180
WES22-07	2	8/29/2022	0	80	402	ND	ND	ND	ND	ND	ND	ND	290
WES22-08	2	8/29/2022	0	50	380	ND	ND	ND	ND	ND	ND	ND	270
WES22-09	1	8/30/2022	0	74	532	ND	ND	ND	ND	ND	ND	ND	180
WES22-09	2	8/31/2022	0	28	321	ND	ND	ND	ND	ND	ND	ND	ND
WES22-10	1	8/30/2022	0	72	430	ND	ND	ND	ND	ND	ND	ND	130
WES22-11	1	8/30/2022	0	10	452	ND	ND	ND	ND	ND	ND	ND	110
WES22-12	1	8/30/2022	0	18	360	ND	ND	ND	ND	ND	ND	ND	ND
WES22-13	1	8/31/2022	0	20	395	ND	ND	ND	ND	ND	ND	ND	ND
WES22-14	1	8/31/2022	0	18	437	ND	ND	ND	ND	ND	ND	ND	65
WES22-15	1	8/31/2022	0	25	317	ND	ND	ND	ND	ND	ND	ND	ND
WES22-16	1	8/31/2022	0	55	225	ND	ND	ND	ND	ND	ND	ND	ND
WES22-17	1	8/31/2022	0	48	280	ND	ND	ND	ND	ND	ND	ND	ND
WES22-18	2	8/31/2022	0	99	389	ND	ND	ND	ND	ND	ND	ND	ND
WES22-19	3	8/31/2022	0	55	345	ND	ND	ND	ND	ND	ND	ND	ND
WES22-20	3	8/31/2022	0	72	456	ND	ND	ND	ND	ND	ND	ND	ND
WES22-21	1.5	8/31/2022	0	43	220	ND	ND	ND	ND	ND	ND	ND	ND

"ND" Not Detected at the Reporting Limit

"-" indicates not analyzed/assessed

Bold and grey shaded indicates exceedance outside of NM OCD Closure Criteria (on-pad)

ATTACHMENT 7



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 06, 2022

Monica Peppin

Vertex Resources Services, Inc.

3101 Boyd Drive

Carlsbad, NM 88220

TEL: (505) 506-0040

FAX:

RE: Onyx 29 CTB 1

OrderNo.: 2205A92

Dear Monica Peppin:

Hall Environmental Analysis Laboratory received 10 sample(s) on 5/25/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order 2205A92

Date Reported: 6/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-01 0'

Project: Onyx 29 CTB 1

Collection Date: 5/23/2022 9:00:00 AM

Lab ID: 2205A92-001

Matrix: SOIL

Received Date: 5/25/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	8.9		mg/Kg	1	5/27/2022 4:51:36 PM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	5/27/2022 4:51:36 PM
Surr: DNOP	82.5	51.1-141		%Rec	1	5/27/2022 4:51:36 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	5/31/2022 9:09:06 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.025		mg/Kg	1	5/26/2022 9:46:31 PM
Toluene	ND	0.050		mg/Kg	1	5/26/2022 9:46:31 PM
Ethylbenzene	ND	0.050		mg/Kg	1	5/26/2022 9:46:31 PM
Xylenes, Total	ND	0.10		mg/Kg	1	5/26/2022 9:46:31 PM
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	5/26/2022 9:46:31 PM
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	5/26/2022 9:46:31 PM
Surr: Dibromofluoromethane	113	70-130		%Rec	1	5/26/2022 9:46:31 PM
Surr: Toluene-d8	101	70-130		%Rec	1	5/26/2022 9:46:31 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/26/2022 9:46:31 PM
Surr: BFB	108	70-130		%Rec	1	5/26/2022 9:46:31 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 1 of 14

Analytical Report

Lab Order 2205A92

Date Reported: 6/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-02 0'

Project: Onyx 29 CTB 1

Collection Date: 5/23/2022 9:10:00 AM

Lab ID: 2205A92-002

Matrix: SOIL

Received Date: 5/25/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	5/27/2022 5:02:29 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	5/27/2022 5:02:29 PM
Surr: DNOP	71.6	51.1-141		%Rec	1	5/27/2022 5:02:29 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	200	60		mg/Kg	20	5/31/2022 9:46:20 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.024		mg/Kg	1	5/26/2022 10:15:00 PM
Toluene	ND	0.048		mg/Kg	1	5/26/2022 10:15:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	5/26/2022 10:15:00 PM
Xylenes, Total	ND	0.095		mg/Kg	1	5/26/2022 10:15:00 PM
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	1	5/26/2022 10:15:00 PM
Surr: 4-Bromofluorobenzene	97.8	70-130		%Rec	1	5/26/2022 10:15:00 PM
Surr: Dibromofluoromethane	112	70-130		%Rec	1	5/26/2022 10:15:00 PM
Surr: Toluene-d8	99.5	70-130		%Rec	1	5/26/2022 10:15:00 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/26/2022 10:15:00 PM
Surr: BFB	108	70-130		%Rec	1	5/26/2022 10:15:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2205A92

Date Reported: 6/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-03 0'

Project: Onyx 29 CTB 1

Collection Date: 5/23/2022 9:20:00 AM

Lab ID: 2205A92-003

Matrix: SOIL

Received Date: 5/25/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	5/27/2022 5:13:19 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	5/27/2022 5:13:19 PM
Surr: DNOP	92.8	51.1-141		%Rec	1	5/27/2022 5:13:19 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	45000	1500		mg/Kg	500	6/2/2022 11:54:14 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.025		mg/Kg	1	5/26/2022 10:43:31 PM
Toluene	ND	0.050		mg/Kg	1	5/26/2022 10:43:31 PM
Ethylbenzene	ND	0.050		mg/Kg	1	5/26/2022 10:43:31 PM
Xylenes, Total	ND	0.10		mg/Kg	1	5/26/2022 10:43:31 PM
Surr: 1,2-Dichloroethane-d4	98.5	70-130		%Rec	1	5/26/2022 10:43:31 PM
Surr: 4-Bromofluorobenzene	99.3	70-130		%Rec	1	5/26/2022 10:43:31 PM
Surr: Dibromofluoromethane	111	70-130		%Rec	1	5/26/2022 10:43:31 PM
Surr: Toluene-d8	101	70-130		%Rec	1	5/26/2022 10:43:31 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/26/2022 10:43:31 PM
Surr: BFB	109	70-130		%Rec	1	5/26/2022 10:43:31 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 3 of 14

Analytical Report

Lab Order 2205A92

Date Reported: 6/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-03 2'

Project: Onyx 29 CTB 1

Collection Date: 5/23/2022 9:30:00 AM

Lab ID: 2205A92-004

Matrix: SOIL

Received Date: 5/25/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	5/27/2022 5:24:09 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	5/27/2022 5:24:09 PM
Surr: DNOP	104	51.1-141		%Rec	1	5/27/2022 5:24:09 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	550	60		mg/Kg	20	5/31/2022 10:11:09 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.025		mg/Kg	1	5/27/2022 1:06:40 AM
Toluene	ND	0.050		mg/Kg	1	5/27/2022 1:06:40 AM
Ethylbenzene	ND	0.050		mg/Kg	1	5/27/2022 1:06:40 AM
Xylenes, Total	ND	0.10		mg/Kg	1	5/27/2022 1:06:40 AM
Surr: 1,2-Dichloroethane-d4	96.0	70-130		%Rec	1	5/27/2022 1:06:40 AM
Surr: 4-Bromofluorobenzene	96.0	70-130		%Rec	1	5/27/2022 1:06:40 AM
Surr: Dibromofluoromethane	108	70-130		%Rec	1	5/27/2022 1:06:40 AM
Surr: Toluene-d8	99.7	70-130		%Rec	1	5/27/2022 1:06:40 AM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/27/2022 1:06:40 AM
Surr: BFB	107	70-130		%Rec	1	5/27/2022 1:06:40 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2205A92

Date Reported: 6/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-04 0'

Project: Onyx 29 CTB 1

Collection Date: 5/23/2022 9:40:00 AM

Lab ID: 2205A92-005

Matrix: SOIL

Received Date: 5/25/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	5/27/2022 5:34:57 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	5/27/2022 5:34:57 PM
Surr: DNOP	81.7	51.1-141		%Rec	1	5/27/2022 5:34:57 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	110	60		mg/Kg	20	5/31/2022 10:23:34 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.024		mg/Kg	1	5/27/2022 1:35:23 AM
Toluene	ND	0.049		mg/Kg	1	5/27/2022 1:35:23 AM
Ethylbenzene	ND	0.049		mg/Kg	1	5/27/2022 1:35:23 AM
Xylenes, Total	ND	0.097		mg/Kg	1	5/27/2022 1:35:23 AM
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	1	5/27/2022 1:35:23 AM
Surr: 4-Bromofluorobenzene	98.4	70-130		%Rec	1	5/27/2022 1:35:23 AM
Surr: Dibromofluoromethane	109	70-130		%Rec	1	5/27/2022 1:35:23 AM
Surr: Toluene-d8	100	70-130		%Rec	1	5/27/2022 1:35:23 AM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/27/2022 1:35:23 AM
Surr: BFB	110	70-130		%Rec	1	5/27/2022 1:35:23 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2205A92

Date Reported: 6/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-05 0'

Project: Onyx 29 CTB 1

Collection Date: 5/23/2022 9:50:00 AM

Lab ID: 2205A92-006

Matrix: SOIL

Received Date: 5/25/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	5/27/2022 5:45:51 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	5/27/2022 5:45:51 PM
Surr: DNOP	82.5	51.1-141		%Rec	1	5/27/2022 5:45:51 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	1400	60		mg/Kg	20	5/31/2022 10:35:58 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.024		mg/Kg	1	5/27/2022 2:03:54 AM
Toluene	ND	0.049		mg/Kg	1	5/27/2022 2:03:54 AM
Ethylbenzene	ND	0.049		mg/Kg	1	5/27/2022 2:03:54 AM
Xylenes, Total	ND	0.098		mg/Kg	1	5/27/2022 2:03:54 AM
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	5/27/2022 2:03:54 AM
Surr: 4-Bromofluorobenzene	97.8	70-130		%Rec	1	5/27/2022 2:03:54 AM
Surr: Dibromofluoromethane	110	70-130		%Rec	1	5/27/2022 2:03:54 AM
Surr: Toluene-d8	100	70-130		%Rec	1	5/27/2022 2:03:54 AM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/27/2022 2:03:54 AM
Surr: BFB	109	70-130		%Rec	1	5/27/2022 2:03:54 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2205A92

Date Reported: 6/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-06 0'

Project: Onyx 29 CTB 1

Collection Date: 5/23/2022 10:00:00 AM

Lab ID: 2205A92-007

Matrix: SOIL

Received Date: 5/25/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	5/27/2022 5:56:48 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	5/27/2022 5:56:48 PM
Surr: DNOP	92.5	51.1-141		%Rec	1	5/27/2022 5:56:48 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	7700	300		mg/Kg	100	6/2/2022 5:35:08 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.025		mg/Kg	1	5/27/2022 2:32:20 AM
Toluene	ND	0.049		mg/Kg	1	5/27/2022 2:32:20 AM
Ethylbenzene	ND	0.049		mg/Kg	1	5/27/2022 2:32:20 AM
Xylenes, Total	ND	0.099		mg/Kg	1	5/27/2022 2:32:20 AM
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	5/27/2022 2:32:20 AM
Surr: 4-Bromofluorobenzene	97.9	70-130		%Rec	1	5/27/2022 2:32:20 AM
Surr: Dibromofluoromethane	113	70-130		%Rec	1	5/27/2022 2:32:20 AM
Surr: Toluene-d8	99.3	70-130		%Rec	1	5/27/2022 2:32:20 AM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/27/2022 2:32:20 AM
Surr: BFB	106	70-130		%Rec	1	5/27/2022 2:32:20 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 7 of 14

Analytical Report

Lab Order 2205A92

Date Reported: 6/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-06 2'

Project: Onyx 29 CTB 1

Collection Date: 5/23/2022 10:10:00 AM

Lab ID: 2205A92-008

Matrix: SOIL

Received Date: 5/25/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	5/27/2022 6:07:50 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	5/27/2022 6:07:50 PM
Surr: DNOP	113	51.1-141		%Rec	1	5/27/2022 6:07:50 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	730	60		mg/Kg	20	5/31/2022 11:25:34 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.024		mg/Kg	1	5/27/2022 3:00:45 AM
Toluene	ND	0.048		mg/Kg	1	5/27/2022 3:00:45 AM
Ethylbenzene	ND	0.048		mg/Kg	1	5/27/2022 3:00:45 AM
Xylenes, Total	ND	0.096		mg/Kg	1	5/27/2022 3:00:45 AM
Surr: 1,2-Dichloroethane-d4	100	70-130		%Rec	1	5/27/2022 3:00:45 AM
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	5/27/2022 3:00:45 AM
Surr: Dibromofluoromethane	115	70-130		%Rec	1	5/27/2022 3:00:45 AM
Surr: Toluene-d8	99.6	70-130		%Rec	1	5/27/2022 3:00:45 AM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/27/2022 3:00:45 AM
Surr: BFB	113	70-130		%Rec	1	5/27/2022 3:00:45 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 8 of 14

Analytical Report

Lab Order 2205A92

Date Reported: 6/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-07 0'

Project: Onyx 29 CTB 1

Collection Date: 5/23/2022 10:20:00 AM

Lab ID: 2205A92-009

Matrix: SOIL

Received Date: 5/25/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	5/27/2022 6:18:52 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	5/27/2022 6:18:52 PM
Surr: DNOP	75.9	51.1-141		%Rec	1	5/27/2022 6:18:52 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	89	59		mg/Kg	20	5/31/2022 11:37:58 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.024		mg/Kg	1	5/27/2022 3:29:26 AM
Toluene	ND	0.047		mg/Kg	1	5/27/2022 3:29:26 AM
Ethylbenzene	ND	0.047		mg/Kg	1	5/27/2022 3:29:26 AM
Xylenes, Total	ND	0.094		mg/Kg	1	5/27/2022 3:29:26 AM
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	5/27/2022 3:29:26 AM
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	5/27/2022 3:29:26 AM
Surr: Dibromofluoromethane	114	70-130		%Rec	1	5/27/2022 3:29:26 AM
Surr: Toluene-d8	100	70-130		%Rec	1	5/27/2022 3:29:26 AM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	5/27/2022 3:29:26 AM
Surr: BFB	107	70-130		%Rec	1	5/27/2022 3:29:26 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 9 of 14

Analytical Report

Lab Order 2205A92

Date Reported: 6/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-08 0'

Project: Onyx 29 CTB 1

Collection Date: 5/23/2022 10:30:00 AM

Lab ID: 2205A92-010

Matrix: SOIL

Received Date: 5/25/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	15	8.8		mg/Kg	1	5/27/2022 6:29:54 PM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	5/27/2022 6:29:54 PM
Surr: DNOP	82.3	51.1-141		%Rec	1	5/27/2022 6:29:54 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	5/31/2022 1:19:34 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.024		mg/Kg	1	5/27/2022 3:57:57 AM
Toluene	ND	0.047		mg/Kg	1	5/27/2022 3:57:57 AM
Ethylbenzene	ND	0.047		mg/Kg	1	5/27/2022 3:57:57 AM
Xylenes, Total	ND	0.094		mg/Kg	1	5/27/2022 3:57:57 AM
Surr: 1,2-Dichloroethane-d4	100	70-130		%Rec	1	5/27/2022 3:57:57 AM
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	5/27/2022 3:57:57 AM
Surr: Dibromofluoromethane	112	70-130		%Rec	1	5/27/2022 3:57:57 AM
Surr: Toluene-d8	101	70-130		%Rec	1	5/27/2022 3:57:57 AM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	5/27/2022 3:57:57 AM
Surr: BFB	110	70-130		%Rec	1	5/27/2022 3:57:57 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2205A92

06-Jun-22

Client: Vertex Resources Services, Inc.**Project:** Onyx 29 CTB 1

Sample ID: MB-67791	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 67791	RunNo: 88375								
Prep Date: 5/31/2022	Analysis Date: 5/31/2022	SeqNo: 3135632 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-67791	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 67791	RunNo: 88375								
Prep Date: 5/31/2022	Analysis Date: 5/31/2022	SeqNo: 3135633 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.1	90	110			

Sample ID: MB-67792	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 67792	RunNo: 88387								
Prep Date: 5/31/2022	Analysis Date: 5/31/2022	SeqNo: 3135739 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-67792	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 67792	RunNo: 88387								
Prep Date: 5/31/2022	Analysis Date: 5/31/2022	SeqNo: 3135740 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.7	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2205A92

06-Jun-22

Client: Vertex Resources Services, Inc.**Project:** Onyx 29 CTB 1

Sample ID: MB-67713	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 67713	RunNo: 88321								
Prep Date: 5/26/2022	Analysis Date: 5/27/2022	SeqNo: 3133778 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.2		10.00		92.2	51.1	141			

Sample ID: LCS-67713	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 67713	RunNo: 88321								
Prep Date: 5/26/2022	Analysis Date: 5/27/2022	SeqNo: 3133779 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	10	50.00	0	99.1	64.4	127			
Surr: DNOP	4.1		5.000		82.4	51.1	141			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2205A92

06-Jun-22

Client: Vertex Resources Services, Inc.**Project:** Onyx 29 CTB 1

Sample ID: ics-67701	SampType: LCS4	TestCode: EPA Method 8260B: Volatiles Short List								
Client ID: BatchQC	Batch ID: 67701	RunNo: 88322								
Prep Date: 5/25/2022	Analysis Date: 5/26/2022	SeqNo: 3132369	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.025	1.000	0	92.9	80	120			
Toluene	0.98	0.050	1.000	0	97.8	80	120			
Ethylbenzene	1.0	0.050	1.000	0	101	80	120			
Xylenes, Total	3.0	0.10	3.000	0	101	80	120			
Surr: 1,2-Dichloroethane-d4	0.52		0.5000		104	70	130			
Surr: 4-Bromofluorobenzene	0.48		0.5000		95.1	70	130			
Surr: Dibromofluoromethane	0.56		0.5000		113	70	130			
Surr: Toluene-d8	0.49		0.5000		97.2	70	130			

Sample ID: mb-67701	SampType: MBLK	TestCode: EPA Method 8260B: Volatiles Short List								
Client ID: PBS	Batch ID: 67701	RunNo: 88322								
Prep Date: 5/25/2022	Analysis Date: 5/26/2022	SeqNo: 3132370	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 1,2-Dichloroethane-d4	0.52		0.5000		103	70	130			
Surr: 4-Bromofluorobenzene	0.50		0.5000		100	70	130			
Surr: Dibromofluoromethane	0.58		0.5000		115	70	130			
Surr: Toluene-d8	0.50		0.5000		100	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2205A92

06-Jun-22

Client: Vertex Resources Services, Inc.
Project: Onyx 29 CTB 1

Sample ID: lcs-67701	SampType: LCS			TestCode: EPA Method 8015D Mod: Gasoline Range						
Client ID: LCSS	Batch ID: 67701			RunNo: 88322						
Prep Date: 5/25/2022	Analysis Date: 5/26/2022			SeqNo: 3132396		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	95.6	70	130			
Surr: BFB	510		500.0		102	70	130			

Sample ID: mb-67701	SampType: MBLK			TestCode: EPA Method 8015D Mod: Gasoline Range						
Client ID: PBS	Batch ID: 67701			RunNo: 88322						
Prep Date: 5/25/2022	Analysis Date: 5/26/2022			SeqNo: 3132397		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	550		500.0		109	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

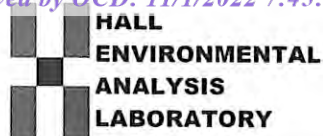
E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

Page 14 of 14



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Vertex Resources
Services, Inc.

Work Order Number: 2205A92

RcptNo: 1

Received By: Juan Rojas

5/25/2022 7:15:00 AM

Completed By: Sean Livingston

5/25/2022 8:44:36 AM

Reviewed By:

jr 5/25/22

Juan Rojas

Sean Livingston

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☐ No ☐ NA ☒
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH:

(<2 or >12 unless noted)

Adjusted? _____

Checked by: *jr 5-25-22*

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

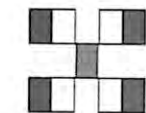
Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.3	Good				

Chain-of-Custody Record		Turn-Around Time:
Client: <u>Vertex</u>	<input checked="" type="checkbox"/> Standard	<input checked="" type="checkbox"/> Rush <u>5 Days</u>
Mailing Address: <u>(Devon)</u>	Project Name: <u>Onyx 29 CTB 1</u>	
<u>on file</u>	Project #: <u>22E-01720</u>	
Phone #: _____	Project Manager: <u>Monica Peppin</u>	
email or Fax#: _____	Sampler: <u>Scarff, C Dixon</u>	
QA/QC Package: <u>Level 4 (Full Validation)</u>	On Ice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<input type="checkbox"/> Standard	# of Coolers: <u>1</u>	
Accreditation: <input type="checkbox"/> Az Compliance		
<input type="checkbox"/> NELAC <input type="checkbox"/> Other _____		
<input type="checkbox"/> EDD (Type) _____		



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

[illegible]

Remarks:	work order	21029815
----------	------------	----------

- B direct Bill devon

Date:	Time:	Relinquished by:	Received by:	Via:	Date:	Time:
5/23	4:45	Sally Cotton	Blum		5/24	1030
5/24	9:00	Blum	Blum		5/24	7:15



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

August 18, 2022

Kent Stallings

Vertex Resources Services, Inc.

3101 Boyd Drive

Carlsbad, NM 88220

TEL: (505) 506-0040

FAX:

RE: Onyx 29 CTB1 Separator

OrderNo.: 2208802

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 16 sample(s) on 8/12/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order 2208802

Date Reported: 8/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-01 1'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/10/2022 1:00:00 PM

Lab ID: 2208802-001

Matrix: SOIL

Received Date: 8/12/2022 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: mb
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	8/16/2022 1:38:25 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/16/2022 1:38:25 PM
Surr: DNOP	97.7	21-129		%Rec	1	8/16/2022 1:38:25 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/15/2022 6:33:00 PM
Surr: BFB	99.5	37.7-212		%Rec	1	8/15/2022 6:33:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.024		mg/Kg	1	8/15/2022 6:33:00 PM
Toluene	ND	0.049		mg/Kg	1	8/15/2022 6:33:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/15/2022 6:33:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	8/15/2022 6:33:00 PM
Surr: 4-Bromofluorobenzene	96.6	70-130		%Rec	1	8/15/2022 6:33:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	1300	60		mg/Kg	20	8/15/2022 11:14:26 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 1 of 23

Analytical Report

Lab Order 2208802

Date Reported: 8/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-02 1'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/10/2022 1:05:00 PM

Lab ID: 2208802-002

Matrix: SOIL

Received Date: 8/12/2022 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/16/2022 7:34:12 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/16/2022 7:34:12 AM
Surr: DNOP	90.9	21-129		%Rec	1	8/16/2022 7:34:12 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/15/2022 6:53:00 PM
Surr: BFB	101	37.7-212		%Rec	1	8/15/2022 6:53:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.024		mg/Kg	1	8/15/2022 6:53:00 PM
Toluene	ND	0.049		mg/Kg	1	8/15/2022 6:53:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/15/2022 6:53:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	8/15/2022 6:53:00 PM
Surr: 4-Bromofluorobenzene	95.7	70-130		%Rec	1	8/15/2022 6:53:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	760	60		mg/Kg	20	8/15/2022 11:51:27 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 2 of 23

Analytical Report

Lab Order 2208802

Date Reported: 8/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-03 1'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/10/2022 1:10:00 PM

Lab ID: 2208802-003

Matrix: SOIL

Received Date: 8/12/2022 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	13		mg/Kg	1	8/16/2022 7:48:07 AM
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	8/16/2022 7:48:07 AM
Surr: DNOP	87.2	21-129		%Rec	1	8/16/2022 7:48:07 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/15/2022 7:13:00 PM
Surr: BFB	99.3	37.7-212		%Rec	1	8/15/2022 7:13:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.025		mg/Kg	1	8/15/2022 7:13:00 PM
Toluene	ND	0.049		mg/Kg	1	8/15/2022 7:13:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/15/2022 7:13:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	8/15/2022 7:13:00 PM
Surr: 4-Bromofluorobenzene	96.6	70-130		%Rec	1	8/15/2022 7:13:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	520	60		mg/Kg	20	8/15/2022 10:08:26 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 3 of 23

Analytical Report

Lab Order 2208802

Date Reported: 8/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-04 2'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/10/2022 1:15:00 PM

Lab ID: 2208802-004

Matrix: SOIL

Received Date: 8/12/2022 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	8/16/2022 8:02:06 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/16/2022 8:02:06 AM
Surr: DNOP	88.2	21-129		%Rec	1	8/16/2022 8:02:06 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/15/2022 7:33:00 PM
Surr: BFB	102	37.7-212		%Rec	1	8/15/2022 7:33:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.024		mg/Kg	1	8/15/2022 7:33:00 PM
Toluene	ND	0.049		mg/Kg	1	8/15/2022 7:33:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/15/2022 7:33:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	8/15/2022 7:33:00 PM
Surr: 4-Bromofluorobenzene	96.3	70-130		%Rec	1	8/15/2022 7:33:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	450	60		mg/Kg	20	8/15/2022 10:20:50 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 4 of 23

Analytical Report

Lab Order 2208802

Date Reported: 8/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-05 2'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/10/2022 1:20:00 PM

Lab ID: 2208802-005

Matrix: SOIL

Received Date: 8/12/2022 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/16/2022 8:15:31 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/16/2022 8:15:31 AM
Surr: DNOP	90.2	21-129		%Rec	1	8/16/2022 8:15:31 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/15/2022 7:52:00 PM
Surr: BFB	99.2	37.7-212		%Rec	1	8/15/2022 7:52:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.025		mg/Kg	1	8/15/2022 7:52:00 PM
Toluene	ND	0.049		mg/Kg	1	8/15/2022 7:52:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/15/2022 7:52:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	8/15/2022 7:52:00 PM
Surr: 4-Bromofluorobenzene	96.7	70-130		%Rec	1	8/15/2022 7:52:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	87	60		mg/Kg	20	8/15/2022 10:33:14 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2208802

Date Reported: 8/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-07 2'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/10/2022 1:25:00 PM

Lab ID: 2208802-006

Matrix: SOIL

Received Date: 8/12/2022 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/16/2022 8:29:29 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/16/2022 8:29:29 AM
Surr: DNOP	93.4	21-129		%Rec	1	8/16/2022 8:29:29 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/15/2022 8:12:00 PM
Surr: BFB	97.3	37.7-212		%Rec	1	8/15/2022 8:12:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.025		mg/Kg	1	8/15/2022 8:12:00 PM
Toluene	ND	0.050		mg/Kg	1	8/15/2022 8:12:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	8/15/2022 8:12:00 PM
Xylenes, Total	ND	0.10		mg/Kg	1	8/15/2022 8:12:00 PM
Surr: 4-Bromofluorobenzene	95.8	70-130		%Rec	1	8/15/2022 8:12:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	71	60		mg/Kg	20	8/15/2022 11:10:27 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 6 of 23

Analytical Report

Lab Order 2208802

Date Reported: 8/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-09 1'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/10/2022 1:30:00 PM

Lab ID: 2208802-007

Matrix: SOIL

Received Date: 8/12/2022 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	8/16/2022 8:43:34 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/16/2022 8:43:34 AM
Surr: DNOP	93.6	21-129		%Rec	1	8/16/2022 8:43:34 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/15/2022 8:32:00 PM
Surr: BFB	99.6	37.7-212		%Rec	1	8/15/2022 8:32:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.024		mg/Kg	1	8/15/2022 8:32:00 PM
Toluene	ND	0.049		mg/Kg	1	8/15/2022 8:32:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/15/2022 8:32:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	8/15/2022 8:32:00 PM
Surr: 4-Bromofluorobenzene	98.1	70-130		%Rec	1	8/15/2022 8:32:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	2800	150		mg/Kg	50	8/16/2022 7:57:24 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2208802

Date Reported: 8/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-11 1'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/10/2022 1:35:00 PM

Lab ID: 2208802-008

Matrix: SOIL

Received Date: 8/12/2022 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/16/2022 8:57:38 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/16/2022 8:57:38 AM
Surr: DNOP	91.4	21-129		%Rec	1	8/16/2022 8:57:38 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/15/2022 8:52:00 PM
Surr: BFB	102	37.7-212		%Rec	1	8/15/2022 8:52:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.025		mg/Kg	1	8/15/2022 8:52:00 PM
Toluene	ND	0.050		mg/Kg	1	8/15/2022 8:52:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	8/15/2022 8:52:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	8/15/2022 8:52:00 PM
Surr: 4-Bromofluorobenzene	97.6	70-130		%Rec	1	8/15/2022 8:52:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	1100	60		mg/Kg	20	8/15/2022 11:35:16 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 8 of 23

Analytical Report

Lab Order 2208802

Date Reported: 8/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-01 2'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/10/2022 1:40:00 PM

Lab ID: 2208802-009

Matrix: SOIL

Received Date: 8/12/2022 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/16/2022 9:11:16 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/16/2022 9:11:16 AM
Surr: DNOP	87.9	21-129		%Rec	1	8/16/2022 9:11:16 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/15/2022 9:12:00 PM
Surr: BFB	98.6	37.7-212		%Rec	1	8/15/2022 9:12:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.024		mg/Kg	1	8/15/2022 9:12:00 PM
Toluene	ND	0.048		mg/Kg	1	8/15/2022 9:12:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	8/15/2022 9:12:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	8/15/2022 9:12:00 PM
Surr: 4-Bromofluorobenzene	95.7	70-130		%Rec	1	8/15/2022 9:12:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	760	60		mg/Kg	20	8/15/2022 11:47:40 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 9 of 23

Analytical Report

Lab Order 2208802

Date Reported: 8/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-02 4'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/10/2022 1:45:00 PM

Lab ID: 2208802-010

Matrix: SOIL

Received Date: 8/12/2022 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	8/15/2022 10:20:06 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/15/2022 10:20:06 PM
Surr: DNOP	84.9	21-129		%Rec	1	8/15/2022 10:20:06 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/16/2022 10:08:00 AM
Surr: BFB	100	37.7-212		%Rec	1	8/16/2022 10:08:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	8/16/2022 10:08:00 AM
Toluene	ND	0.048		mg/Kg	1	8/16/2022 10:08:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	8/16/2022 10:08:00 AM
Xylenes, Total	ND	0.096		mg/Kg	1	8/16/2022 10:08:00 AM
Surr: 4-Bromofluorobenzene	97.1	70-130		%Rec	1	8/16/2022 10:08:00 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	620	60		mg/Kg	20	8/16/2022 12:00:04 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2208802

Date Reported: 8/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-03 4'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/10/2022 1:50:00 PM

Lab ID: 2208802-011

Matrix: SOIL

Received Date: 8/12/2022 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	8/15/2022 11:08:33 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/15/2022 11:08:33 PM
Surr: DNOP	83.1	21-129		%Rec	1	8/15/2022 11:08:33 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/16/2022 10:28:00 AM
Surr: BFB	101	37.7-212		%Rec	1	8/16/2022 10:28:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.025		mg/Kg	1	8/16/2022 10:28:00 AM
Toluene	ND	0.050		mg/Kg	1	8/16/2022 10:28:00 AM
Ethylbenzene	ND	0.050		mg/Kg	1	8/16/2022 10:28:00 AM
Xylenes, Total	ND	0.099		mg/Kg	1	8/16/2022 10:28:00 AM
Surr: 4-Bromofluorobenzene	99.7	70-130		%Rec	1	8/16/2022 10:28:00 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	210	60		mg/Kg	20	8/16/2022 12:12:28 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 11 of 23

Analytical Report

Lab Order 2208802

Date Reported: 8/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-04 4'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/10/2022 1:55:00 PM

Lab ID: 2208802-012

Matrix: SOIL

Received Date: 8/12/2022 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	8/15/2022 11:24:37 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/15/2022 11:24:37 PM
Surr: DNOP	89.2	21-129		%Rec	1	8/15/2022 11:24:37 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/16/2022 10:48:00 AM
Surr: BFB	101	37.7-212		%Rec	1	8/16/2022 10:48:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	8/16/2022 10:48:00 AM
Toluene	ND	0.048		mg/Kg	1	8/16/2022 10:48:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	8/16/2022 10:48:00 AM
Xylenes, Total	ND	0.096		mg/Kg	1	8/16/2022 10:48:00 AM
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	8/16/2022 10:48:00 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	130	60		mg/Kg	20	8/16/2022 12:24:52 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2208802

Date Reported: 8/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-05 4'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/10/2022 2:00:00 PM

Lab ID: 2208802-013

Matrix: SOIL

Received Date: 8/12/2022 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/15/2022 11:40:33 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/15/2022 11:40:33 PM
Surr: DNOP	93.5	21-129		%Rec	1	8/15/2022 11:40:33 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/16/2022 11:08:00 AM
Surr: BFB	104	37.7-212		%Rec	1	8/16/2022 11:08:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	8/16/2022 11:08:00 AM
Toluene	ND	0.047		mg/Kg	1	8/16/2022 11:08:00 AM
Ethylbenzene	ND	0.047		mg/Kg	1	8/16/2022 11:08:00 AM
Xylenes, Total	ND	0.094		mg/Kg	1	8/16/2022 11:08:00 AM
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	8/16/2022 11:08:00 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	1200	60		mg/Kg	20	8/16/2022 12:37:17 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2208802

Date Reported: 8/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-06 2'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/10/2022 2:05:00 PM

Lab ID: 2208802-014

Matrix: SOIL

Received Date: 8/12/2022 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/15/2022 11:56:23 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/15/2022 11:56:23 PM
Surr: DNOP	91.6	21-129		%Rec	1	8/15/2022 11:56:23 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/16/2022 11:27:00 AM
Surr: BFB	102	37.7-212		%Rec	1	8/16/2022 11:27:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	8/16/2022 11:27:00 AM
Toluene	ND	0.047		mg/Kg	1	8/16/2022 11:27:00 AM
Ethylbenzene	ND	0.047		mg/Kg	1	8/16/2022 11:27:00 AM
Xylenes, Total	ND	0.095		mg/Kg	1	8/16/2022 11:27:00 AM
Surr: 4-Bromofluorobenzene	97.7	70-130		%Rec	1	8/16/2022 11:27:00 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	810	60		mg/Kg	20	8/16/2022 12:49:41 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2208802

Date Reported: 8/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-07 2'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/10/2022 2:10:00 PM

Lab ID: 2208802-015

Matrix: SOIL

Received Date: 8/12/2022 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	8/16/2022 12:11:58 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/16/2022 12:11:58 AM
Surr: DNOP	88.3	21-129		%Rec	1	8/16/2022 12:11:58 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/16/2022 11:47:00 AM
Surr: BFB	104	37.7-212		%Rec	1	8/16/2022 11:47:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	8/16/2022 11:47:00 AM
Toluene	ND	0.048		mg/Kg	1	8/16/2022 11:47:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	8/16/2022 11:47:00 AM
Xylenes, Total	ND	0.097		mg/Kg	1	8/16/2022 11:47:00 AM
Surr: 4-Bromofluorobenzene	99.0	70-130		%Rec	1	8/16/2022 11:47:00 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	970	60		mg/Kg	20	8/16/2022 1:02:05 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2208802

Date Reported: 8/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-08 2'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/10/2022 2:15:00 PM

Lab ID: 2208802-016

Matrix: SOIL

Received Date: 8/12/2022 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	8/16/2022 12:27:56 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/16/2022 12:27:56 AM
Surr: DNOP	84.7	21-129		%Rec	1	8/16/2022 12:27:56 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/16/2022 12:07:00 PM
Surr: BFB	104	37.7-212		%Rec	1	8/16/2022 12:07:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.025		mg/Kg	1	8/16/2022 12:07:00 PM
Toluene	ND	0.049		mg/Kg	1	8/16/2022 12:07:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/16/2022 12:07:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	8/16/2022 12:07:00 PM
Surr: 4-Bromofluorobenzene	98.2	70-130		%Rec	1	8/16/2022 12:07:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	89	60		mg/Kg	20	8/16/2022 1:39:18 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2208802

18-Aug-22

Client: Vertex Resources Services, Inc.**Project:** Onyx 29 CTB1 Separator

Sample ID: MB-69500	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 69500	RunNo: 90282								
Prep Date: 8/15/2022	Analysis Date: 8/15/2022	SeqNo: 3220689 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-69500	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 69500	RunNo: 90282								
Prep Date: 8/15/2022	Analysis Date: 8/15/2022	SeqNo: 3220690 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	97.7	90	110			

Sample ID: MB-69515	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 69515	RunNo: 90298								
Prep Date: 8/15/2022	Analysis Date: 8/15/2022	SeqNo: 3220931 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-69515	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 69515	RunNo: 90298								
Prep Date: 8/15/2022	Analysis Date: 8/15/2022	SeqNo: 3220932 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.2	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2208802

18-Aug-22

Client: Vertex Resources Services, Inc.**Project:** Onyx 29 CTB1 Separator

Sample ID: MB-69511	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 69511	RunNo: 90276								
Prep Date: 8/15/2022	Analysis Date: 8/15/2022	SeqNo: 3221158 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.2		10.00		92.4	21	129			

Sample ID: LCS-69511	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 69511	RunNo: 90276								
Prep Date: 8/15/2022	Analysis Date: 8/15/2022	SeqNo: 3221159 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43	15	50.00	0	85.4	64.4	127			
Surr: DNOP	4.4		5.000		88.7	21	129			

Sample ID: 2208802-010AMS	SampType: MS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: BES22-02 4'	Batch ID: 69511	RunNo: 90276								
Prep Date: 8/15/2022	Analysis Date: 8/15/2022	SeqNo: 3221161 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43	15	48.92	0	87.4	36.1	154			
Surr: DNOP	3.4		4.892		69.2	21	129			

Sample ID: 2208802-010AMSD	SampType: MSD	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: BES22-02 4'	Batch ID: 69511	RunNo: 90276								
Prep Date: 8/15/2022	Analysis Date: 8/15/2022	SeqNo: 3221162 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	42	15	48.69	0	86.5	36.1	154	1.51	33.9	
Surr: DNOP	3.5		4.869		71.9	21	129	0	0	

Sample ID: MB-69473	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 69473	RunNo: 90276								
Prep Date: 8/12/2022	Analysis Date: 8/16/2022	SeqNo: 3221171 Units: %Rec								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.3		10.00		83.1	21	129			

Sample ID: LCS-69473	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 69473	RunNo: 90276								
Prep Date: 8/12/2022	Analysis Date: 8/16/2022	SeqNo: 3221173 Units: %Rec								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2208802

18-Aug-22

Client: Vertex Resources Services, Inc.**Project:** Onyx 29 CTB1 Separator

Sample ID: LCS-69473	SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: LCSS	Batch ID: 69473		RunNo: 90276							
Prep Date: 8/12/2022	Analysis Date: 8/16/2022		SeqNo: 3221173		Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.3		5.000		86.6	21	129			

Sample ID: MB-69507	SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: PBS	Batch ID: 69507		RunNo: 90304							
Prep Date: 8/15/2022	Analysis Date: 8/16/2022		SeqNo: 3221327		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.7		10.00		97.0	21	129			

Sample ID: LCS-69507	SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: LCSS	Batch ID: 69507		RunNo: 90304							
Prep Date: 8/15/2022	Analysis Date: 8/16/2022		SeqNo: 3221328		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43	15	50.00	0	86.2	64.4	127			
Surr: DNOP	4.2		5.000		84.1	21	129			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2208802

18-Aug-22

Client: Vertex Resources Services, Inc.**Project:** Onyx 29 CTB1 Separator

Sample ID: ics-69502	SampType: LCS			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: LCSS	Batch ID: 69502			RunNo: 90302						
Prep Date: 8/15/2022	Analysis Date: 8/16/2022			SeqNo: 3221186		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	104	72.3	137			
Surr: BFB	2200		1000		219	37.7	212			S

Sample ID: mb-69502	SampType: MBLK			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: PBS	Batch ID: 69502			RunNo: 90302						
Prep Date: 8/15/2022	Analysis Date: 8/16/2022			SeqNo: 3221188		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		102	37.7	212			

Sample ID: ics-69476	SampType: LCS			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: LCSS	Batch ID: 69476			RunNo: 90314						
Prep Date: 8/12/2022	Analysis Date: 8/15/2022			SeqNo: 3221639		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	106	72.3	137			
Surr: BFB	2300		1000		228	37.7	212			S

Sample ID: mb-69476	SampType: MBLK			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: PBS	Batch ID: 69476			RunNo: 90314						
Prep Date: 8/12/2022	Analysis Date: 8/15/2022			SeqNo: 3221640		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		104	37.7	212			

Sample ID: 2208802-010ams	SampType: MS			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: BES22-02 4'	Batch ID: 69502			RunNo: 90302						
Prep Date: 8/15/2022	Analysis Date: 8/16/2022			SeqNo: 3222275		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	4.9	24.49	0	114	70	130			
Surr: BFB	2300		979.4		236	37.7	212			S

Sample ID: 2208802-010amsd	SampType: MSD			TestCode: EPA Method 8015D: Gasoline Range						
Client ID: BES22-02 4'	Batch ID: 69502			RunNo: 90302						
Prep Date: 8/15/2022	Analysis Date: 8/16/2022			SeqNo: 3222276		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 2208802
18-Aug-22

Client: Vertex Resources Services, Inc.
Project: Onyx 29 CTB1 Separator

Sample ID: 2208802-010amsd		SampType: MSD			TestCode: EPA Method 8015D: Gasoline Range					
Client ID: BES22-02 4'		Batch ID: 69502			RunNo: 90302					
Prep Date: 8/15/2022		Analysis Date: 8/16/2022			SeqNo: 3222276		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	29	4.9	24.63	0	117	70	130	3.25	20	
Surr: BFB	2300		985.2		237	37.7	212	0	0	S

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2208802

18-Aug-22

Client: Vertex Resources Services, Inc.**Project:** Onyx 29 CTB1 Separator

Sample ID: ics-69502	SampType: LCS			TestCode: EPA Method 8021B: Volatiles						
Client ID: LCSS	Batch ID: 69502			RunNo: 90302						
Prep Date: 8/15/2022	Analysis Date: 8/16/2022			SeqNo: 3221187			Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.025	1.000	0	90.1	80	120			
Toluene	0.92	0.050	1.000	0	92.5	80	120			
Ethylbenzene	0.94	0.050	1.000	0	93.8	80	120			
Xylenes, Total	2.8	0.10	3.000	0	94.1	80	120			
Surr: 4-Bromofluorobenzene	0.99		1.000		98.5	70	130			

Sample ID: mb-69502	SampType: MBLK			TestCode: EPA Method 8021B: Volatiles						
Client ID: PBS	Batch ID: 69502			RunNo: 90302						
Prep Date: 8/15/2022	Analysis Date: 8/16/2022			SeqNo: 3221192			Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.99		1.000		98.8	70	130			

Sample ID: ics-69476	SampType: LCS			TestCode: EPA Method 8021B: Volatiles						
Client ID: LCSS	Batch ID: 69476			RunNo: 90314						
Prep Date: 8/12/2022	Analysis Date: 8/15/2022			SeqNo: 3221663			Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.025	1.000	0	90.2	80	120			
Toluene	0.92	0.050	1.000	0	92.0	80	120			
Ethylbenzene	0.94	0.050	1.000	0	93.8	80	120			
Xylenes, Total	2.8	0.10	3.000	0	93.6	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		103	70	130			

Sample ID: mb-69476	SampType: MBLK			TestCode: EPA Method 8021B: Volatiles						
Client ID: PBS	Batch ID: 69476			RunNo: 90314						
Prep Date: 8/12/2022	Analysis Date: 8/15/2022			SeqNo: 3221664			Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		102	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2208802

18-Aug-22

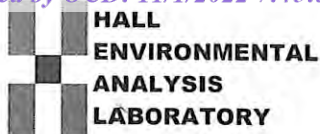
Client: Vertex Resources Services, Inc.**Project:** Onyx 29 CTB1 Separator

Sample ID: 2208802-011ams	SampType: MS	TestCode: EPA Method 8021B: Volatiles								
Client ID: BES22-03 4'	Batch ID: 69502	RunNo: 90302								
Prep Date: 8/15/2022	Analysis Date: 8/16/2022	SeqNo: 3222283 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.88	0.024	0.9497	0	92.5	68.8	120			
Toluene	0.90	0.047	0.9497	0	94.9	73.6	124			
Ethylbenzene	0.93	0.047	0.9497	0	98.1	72.7	129			
Xylenes, Total	2.8	0.095	2.849	0	97.6	75.7	126			
Surr: 4-Bromofluorobenzene	0.95		0.9497		100	70	130			

Sample ID: 2208802-011amsd	SampType: MSD	TestCode: EPA Method 8021B: Volatiles								
Client ID: BES22-03 4'	Batch ID: 69502	RunNo: 90302								
Prep Date: 8/15/2022	Analysis Date: 8/16/2022	SeqNo: 3222284 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.87	0.024	0.9443	0	92.2	68.8	120	0.914	20	
Toluene	0.90	0.047	0.9443	0	95.0	73.6	124	0.439	20	
Ethylbenzene	0.92	0.047	0.9443	0	97.8	72.7	129	0.864	20	
Xylenes, Total	2.8	0.094	2.833	0	97.6	75.7	126	0.516	20	
Surr: 4-Bromofluorobenzene	0.94		0.9443		99.6	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Vertex Resources
Services, Inc.**

Work Order Number: **2208802**

RcptNo: 1

Received By: **Juan Rojas**

8/12/2022 7:20:00 AM

Juan Rojas

Completed By: **Cheyenne Cason**

8/12/2022 8:07:50 AM

Cheyenne Cason

Reviewed By: **TMC**

8/12/22

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☐ No ☐ NA ☒
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH:

(<2 or >12 unless noted)

Adjusted?

Checked by: *JR 8/12/22*

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.5	Good	Not Present			

Chain-of-Custody Record

Client:

Devon/Leiter

Mailing Address:

on file

Phone #:

email or Fax#:

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)Accreditation: ☐ Az Compliance☐ NELAC ☐ Other☐ EDD (Type)Turn-Around Time: *2-Day*☐ Standard ☒ Rush

Project Name:

*Oryx EQ CTB/
(Laboratory)*

Project #:

225-01720-002

Project Manager:

*Kent Starrings*Sampler: *CD*On Ice: ☒ Yes ☐ No# of Coolers: *1*Cooler Temp (including CF): *0.5 to 0.5* (°C)Container Type and # Preservative Type HEAL No. *2208802*

BTEX / MTBE / TMB's (8021)

TPH:8015D(GRO / DRO / MRO)

8081 Pesticides/8082 PCB's

EDB (Method 504.1)

PAHs by 8310 or 8270SIMS

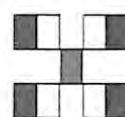
RCRA 8 Metals

Cl, F, Br, NO₃, NO₂, PO₄, SO₄

8260 (VOA)

8270 (Semi-VOA)

Total Coliform (Present/Absent)


**HALL ENVIRONMENTAL
ANALYSIS LABORATORY**
www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO ₃ , NO ₂ , PO ₄ , SO ₄	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
<i>8/10</i>	<i>1:00</i>	<i>SOI</i>	<i>WES22-01 1'</i>	<i>402</i>	<i>ICE</i>	<i>001</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<i>1:05</i>	<i>1:05</i>	<i>1</i>	<i>WES22-02 1'</i>	<i>002</i>	<i>002</i>	<i>002</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<i>1:10</i>	<i>1:10</i>	<i>1</i>	<i>WES22-03 1'</i>	<i>003</i>	<i>003</i>	<i>003</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<i>1:15</i>	<i>1:15</i>	<i>1</i>	<i>WES22-04 2'</i>	<i>004</i>	<i>004</i>	<i>004</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<i>1:20</i>	<i>1:20</i>	<i>1</i>	<i>WES22-05 2'</i>	<i>005</i>	<i>005</i>	<i>005</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<i>1:25</i>	<i>1:25</i>	<i>1</i>	<i>WES22-07 2'</i>	<i>006</i>	<i>006</i>	<i>006</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<i>1:30</i>	<i>1:30</i>	<i>1</i>	<i>WES22-09 1'</i>	<i>007</i>	<i>007</i>	<i>007</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<i>1:35</i>	<i>1:35</i>	<i>1</i>	<i>WES22-11 1'</i>	<i>008</i>	<i>008</i>	<i>008</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<i>1:40</i>	<i>1:40</i>	<i>2</i>	<i>WES22-01 2'</i>	<i>009</i>	<i>009</i>	<i>009</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<i>1:45</i>	<i>1:45</i>	<i>4'</i>	<i>WES22-02 4'</i>	<i>010</i>	<i>010</i>	<i>010</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<i>1:50</i>	<i>1:50</i>	<i>4'</i>	<i>WES22-03 4'</i>	<i>011</i>	<i>011</i>	<i>011</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<i>1:55</i>	<i>1:55</i>	<i>4'</i>	<i>WES22-04 4'</i>	<i>012</i>	<i>012</i>	<i>012</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Received by:

Via:

Date Time

Received by:

Via:

Date Time

Remarks: *CC: Chance Dixon
Direct Bill Devon
W/O #: 21029815*

Chain-of-Custody Record

Client:

Deron/renter

Mailing Address:

on file

Phone #:

email or Fax#:

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time: *2-3 days*

☐ Standard ☒ Rush

Project Name:

*origen ea CTB 1
[separation]*

Project #:

22E-01720-002

Project Manager:

rent savings

Sampler: *CD*

On Ice: ☐ Yes ☐ No

of Coolers: *1*

Cooler Temp (including CF): *0.5-0.5 (°C)*

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
------	------	--------	-------------	----------------------	-------------------	----------

8/10 2:06 501' B5522-05 4' 402 IGC 013 2208802

2:05 B5522-06 2' 014

2:10 B5522-07 2' 015

2:15 B5522-08 2' 016

<input checked="" type="checkbox"/>	BTEX / MTBE / TMB's (8021)
<input checked="" type="checkbox"/>	TPH:8015D(GRO / DRO / MRO)
<input type="checkbox"/>	8081 Pesticides/8082 PCB's
<input type="checkbox"/>	EDB (Method 504.1)
<input type="checkbox"/>	PAHs by 8310 or 8270SIMS
<input type="checkbox"/>	RCRA 8 Metals
<input checked="" type="checkbox"/>	Cl, F, Br, NO ₃ , NO ₂ , PO ₄ , SO ₄
<input type="checkbox"/>	8260 (VOA)
<input type="checkbox"/>	8270 (Semi-VOA)
<input type="checkbox"/>	Total Coliform (Present/Absent)

Received by: *Devin* Via: *6/12/22 1445* Date Time

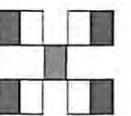
Relinquished by: *Devin* Via: *6/12/22 1445* Date Time

Received by: *Devin* Via: *6/12/22 1445* Date Time

Remarks: *GC: chance Dixon*

Direct Bill Deron

W/O# 21029815



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

August 22, 2022

Kent Stallings

Devon Energy

6488 Seven Rivers Highway

Artesia, NM 88210

TEL: (575) 748-0176

FAX

RE: Onyx 29 CTB1 Separator

OrderNo.: 2208875

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 17 sample(s) on 8/13/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order 2208875

Date Reported: 8/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: WES22-12 2'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/11/2022 10:00:00 AM

Lab ID: 2208875-001

Matrix: SOIL

Received Date: 8/13/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: mb
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/17/2022 12:05:00 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/17/2022 12:05:00 PM
Surr: DNOP	98.4	21-129		%Rec	1	8/17/2022 12:05:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	61		mg/Kg	20	8/16/2022 9:07:54 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: BRM
Benzene	ND	0.024		mg/Kg	1	8/16/2022 5:08:43 PM
Toluene	ND	0.047		mg/Kg	1	8/16/2022 5:08:43 PM
Ethylbenzene	ND	0.047		mg/Kg	1	8/16/2022 5:08:43 PM
Xylenes, Total	ND	0.095		mg/Kg	1	8/16/2022 5:08:43 PM
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	1	8/16/2022 5:08:43 PM
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	8/16/2022 5:08:43 PM
Surr: Dibromofluoromethane	117	70-130		%Rec	1	8/16/2022 5:08:43 PM
Surr: Toluene-d8	98.1	70-130		%Rec	1	8/16/2022 5:08:43 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/16/2022 5:08:43 PM
Surr: BFB	117	70-130		%Rec	1	8/16/2022 5:08:43 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2208875

Date Reported: 8/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: WES22-12 4'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/11/2022 10:05:00 AM

Lab ID: 2208875-002

Matrix: SOIL

Received Date: 8/13/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: mb
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	8/17/2022 12:29:23 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/17/2022 12:29:23 PM
Surr: DNOP	103	21-129		%Rec	1	8/17/2022 12:29:23 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	190	59		mg/Kg	20	8/16/2022 9:45:07 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: BRM
Benzene	ND	0.024		mg/Kg	1	8/16/2022 5:37:25 PM
Toluene	ND	0.048		mg/Kg	1	8/16/2022 5:37:25 PM
Ethylbenzene	ND	0.048		mg/Kg	1	8/16/2022 5:37:25 PM
Xylenes, Total	ND	0.096		mg/Kg	1	8/16/2022 5:37:25 PM
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	1	8/16/2022 5:37:25 PM
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	8/16/2022 5:37:25 PM
Surr: Dibromofluoromethane	122	70-130		%Rec	1	8/16/2022 5:37:25 PM
Surr: Toluene-d8	98.7	70-130		%Rec	1	8/16/2022 5:37:25 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/16/2022 5:37:25 PM
Surr: BFB	118	70-130		%Rec	1	8/16/2022 5:37:25 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 2 of 24

Analytical Report

Lab Order 2208875

Date Reported: 8/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: WES22-13 2'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/11/2022 10:10:00 AM

Lab ID: 2208875-003

Matrix: SOIL

Received Date: 8/13/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: mb
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/17/2022 12:53:58 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/17/2022 12:53:58 PM
Surr: DNOP	82.4	21-129		%Rec	1	8/17/2022 12:53:58 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	59		mg/Kg	20	8/16/2022 9:57:31 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: BRM
Benzene	ND	0.024		mg/Kg	1	8/16/2022 6:06:11 PM
Toluene	ND	0.048		mg/Kg	1	8/16/2022 6:06:11 PM
Ethylbenzene	ND	0.048		mg/Kg	1	8/16/2022 6:06:11 PM
Xylenes, Total	ND	0.096		mg/Kg	1	8/16/2022 6:06:11 PM
Surr: 1,2-Dichloroethane-d4	110	70-130		%Rec	1	8/16/2022 6:06:11 PM
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	8/16/2022 6:06:11 PM
Surr: Dibromofluoromethane	124	70-130		%Rec	1	8/16/2022 6:06:11 PM
Surr: Toluene-d8	99.1	70-130		%Rec	1	8/16/2022 6:06:11 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/16/2022 6:06:11 PM
Surr: BFB	116	70-130		%Rec	1	8/16/2022 6:06:11 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 3 of 24

Analytical Report

Lab Order 2208875

Date Reported: 8/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: WES22-13 4'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/11/2022 10:15:00 AM

Lab ID: 2208875-004

Matrix: SOIL

Received Date: 8/13/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: mb
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	8/17/2022 1:18:14 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/17/2022 1:18:14 PM
Surr: DNOP	77.2	21-129		%Rec	1	8/17/2022 1:18:14 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	8/16/2022 10:34:44 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: BRM
Benzene	ND	0.024		mg/Kg	1	8/16/2022 6:34:53 PM
Toluene	ND	0.049		mg/Kg	1	8/16/2022 6:34:53 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/16/2022 6:34:53 PM
Xylenes, Total	ND	0.098		mg/Kg	1	8/16/2022 6:34:53 PM
Surr: 1,2-Dichloroethane-d4	108	70-130		%Rec	1	8/16/2022 6:34:53 PM
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	8/16/2022 6:34:53 PM
Surr: Dibromofluoromethane	122	70-130		%Rec	1	8/16/2022 6:34:53 PM
Surr: Toluene-d8	101	70-130		%Rec	1	8/16/2022 6:34:53 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/16/2022 6:34:53 PM
Surr: BFB	119	70-130		%Rec	1	8/16/2022 6:34:53 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2208875

Date Reported: 8/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: WES22-14 2'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/11/2022 10:20:00 AM

Lab ID: 2208875-005

Matrix: SOIL

Received Date: 8/13/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: mb
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	8/17/2022 1:42:46 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/17/2022 1:42:46 PM
Surr: DNOP	98.7	21-129		%Rec	1	8/17/2022 1:42:46 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	160	60		mg/Kg	20	8/16/2022 10:47:09 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: BRM
Benzene	ND	0.024		mg/Kg	1	8/16/2022 7:03:33 PM
Toluene	ND	0.047		mg/Kg	1	8/16/2022 7:03:33 PM
Ethylbenzene	ND	0.047		mg/Kg	1	8/16/2022 7:03:33 PM
Xylenes, Total	ND	0.095		mg/Kg	1	8/16/2022 7:03:33 PM
Surr: 1,2-Dichloroethane-d4	109	70-130		%Rec	1	8/16/2022 7:03:33 PM
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	8/16/2022 7:03:33 PM
Surr: Dibromofluoromethane	126	70-130		%Rec	1	8/16/2022 7:03:33 PM
Surr: Toluene-d8	98.4	70-130		%Rec	1	8/16/2022 7:03:33 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/16/2022 7:03:33 PM
Surr: BFB	117	70-130		%Rec	1	8/16/2022 7:03:33 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2208875

Date Reported: 8/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: WES22-14 4'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/11/2022 10:25:00 AM

Lab ID: 2208875-006

Matrix: SOIL

Received Date: 8/13/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	8/17/2022 1:56:26 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/17/2022 1:56:26 PM
Surr: DNOP	93.9	21-129		%Rec	1	8/17/2022 1:56:26 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	170	60		mg/Kg	20	8/16/2022 10:59:33 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: BRM
Benzene	ND	0.025		mg/Kg	1	8/16/2022 7:32:10 PM
Toluene	ND	0.050		mg/Kg	1	8/16/2022 7:32:10 PM
Ethylbenzene	ND	0.050		mg/Kg	1	8/16/2022 7:32:10 PM
Xylenes, Total	ND	0.10		mg/Kg	1	8/16/2022 7:32:10 PM
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	1	8/16/2022 7:32:10 PM
Surr: 4-Bromofluorobenzene	107	70-130		%Rec	1	8/16/2022 7:32:10 PM
Surr: Dibromofluoromethane	119	70-130		%Rec	1	8/16/2022 7:32:10 PM
Surr: Toluene-d8	99.9	70-130		%Rec	1	8/16/2022 7:32:10 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/16/2022 7:32:10 PM
Surr: BFB	119	70-130		%Rec	1	8/16/2022 7:32:10 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 6 of 24

Analytical Report

Lab Order 2208875

Date Reported: 8/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: WES22-15 2'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/11/2022 10:30:00 AM

Lab ID: 2208875-007

Matrix: SOIL

Received Date: 8/13/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/17/2022 11:09:00 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/17/2022 11:09:00 AM
Surr: DNOP	82.1	21-129		%Rec	1	8/17/2022 11:09:00 AM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	8/16/2022 11:11:58 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: BRM
Benzene	ND	0.023		mg/Kg	1	8/16/2022 8:00:48 PM
Toluene	ND	0.047		mg/Kg	1	8/16/2022 8:00:48 PM
Ethylbenzene	ND	0.047		mg/Kg	1	8/16/2022 8:00:48 PM
Xylenes, Total	ND	0.093		mg/Kg	1	8/16/2022 8:00:48 PM
Surr: 1,2-Dichloroethane-d4	107	70-130		%Rec	1	8/16/2022 8:00:48 PM
Surr: 4-Bromofluorobenzene	107	70-130		%Rec	1	8/16/2022 8:00:48 PM
Surr: Dibromofluoromethane	122	70-130		%Rec	1	8/16/2022 8:00:48 PM
Surr: Toluene-d8	101	70-130		%Rec	1	8/16/2022 8:00:48 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/16/2022 8:00:48 PM
Surr: BFB	119	70-130		%Rec	1	8/16/2022 8:00:48 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 7 of 24

Analytical Report

Lab Order 2208875

Date Reported: 8/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: WES22-15 4'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/11/2022 10:35:00 AM

Lab ID: 2208875-008

Matrix: SOIL

Received Date: 8/13/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/17/2022 11:23:03 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/17/2022 11:23:03 AM
Surr: DNOP	78.5	21-129		%Rec	1	8/17/2022 11:23:03 AM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	8/16/2022 11:24:22 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: BRM
Benzene	ND	0.023		mg/Kg	1	8/16/2022 8:29:23 PM
Toluene	ND	0.046		mg/Kg	1	8/16/2022 8:29:23 PM
Ethylbenzene	ND	0.046		mg/Kg	1	8/16/2022 8:29:23 PM
Xylenes, Total	ND	0.093		mg/Kg	1	8/16/2022 8:29:23 PM
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	8/16/2022 8:29:23 PM
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	8/16/2022 8:29:23 PM
Surr: Dibromofluoromethane	115	70-130		%Rec	1	8/16/2022 8:29:23 PM
Surr: Toluene-d8	101	70-130		%Rec	1	8/16/2022 8:29:23 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	8/16/2022 8:29:23 PM
Surr: BFB	122	70-130		%Rec	1	8/16/2022 8:29:23 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 8 of 24

Analytical Report

Lab Order 2208875

Date Reported: 8/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: WES22-16 2'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/11/2022 10:40:00 AM

Lab ID: 2208875-009

Matrix: SOIL

Received Date: 8/13/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/17/2022 9:32:06 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/17/2022 9:32:06 AM
Surr: DNOP	86.9	21-129		%Rec	1	8/17/2022 9:32:06 AM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	8/16/2022 11:36:46 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: BRM
Benzene	ND	0.025		mg/Kg	1	8/16/2022 8:57:57 PM
Toluene	ND	0.050		mg/Kg	1	8/16/2022 8:57:57 PM
Ethylbenzene	ND	0.050		mg/Kg	1	8/16/2022 8:57:57 PM
Xylenes, Total	ND	0.099		mg/Kg	1	8/16/2022 8:57:57 PM
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	8/16/2022 8:57:57 PM
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	8/16/2022 8:57:57 PM
Surr: Dibromofluoromethane	119	70-130		%Rec	1	8/16/2022 8:57:57 PM
Surr: Toluene-d8	99.1	70-130		%Rec	1	8/16/2022 8:57:57 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/16/2022 8:57:57 PM
Surr: BFB	114	70-130		%Rec	1	8/16/2022 8:57:57 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 9 of 24

Analytical Report

Lab Order 2208875

Date Reported: 8/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: WES22-16 4'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/11/2022 10:45:00 AM

Lab ID: 2208875-010

Matrix: SOIL

Received Date: 8/13/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	8/17/2022 9:45:54 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/17/2022 9:45:54 AM
Surr: DNOP	95.8	21-129		%Rec	1	8/17/2022 9:45:54 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	100	60		mg/Kg	20	8/16/2022 7:04:05 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: BRM
Benzene	ND	0.025		mg/Kg	1	8/16/2022 9:26:30 PM
Toluene	ND	0.049		mg/Kg	1	8/16/2022 9:26:30 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/16/2022 9:26:30 PM
Xylenes, Total	ND	0.098		mg/Kg	1	8/16/2022 9:26:30 PM
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	8/16/2022 9:26:30 PM
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	8/16/2022 9:26:30 PM
Surr: Dibromofluoromethane	112	70-130		%Rec	1	8/16/2022 9:26:30 PM
Surr: Toluene-d8	102	70-130		%Rec	1	8/16/2022 9:26:30 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/16/2022 9:26:30 PM
Surr: BFB	121	70-130		%Rec	1	8/16/2022 9:26:30 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2208875

Date Reported: 8/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: WES22-17 2'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/11/2022 10:50:00 AM

Lab ID: 2208875-011

Matrix: SOIL

Received Date: 8/13/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	8/17/2022 9:59:50 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/17/2022 9:59:50 AM
Surr: DNOP	92.7	21-129		%Rec	1	8/17/2022 9:59:50 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	8/16/2022 8:30:31 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: BRM
Benzene	ND	0.024		mg/Kg	1	8/16/2022 9:55:05 PM
Toluene	ND	0.049		mg/Kg	1	8/16/2022 9:55:05 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/16/2022 9:55:05 PM
Xylenes, Total	ND	0.097		mg/Kg	1	8/16/2022 9:55:05 PM
Surr: 1,2-Dichloroethane-d4	107	70-130		%Rec	1	8/16/2022 9:55:05 PM
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	8/16/2022 9:55:05 PM
Surr: Dibromofluoromethane	122	70-130		%Rec	1	8/16/2022 9:55:05 PM
Surr: Toluene-d8	101	70-130		%Rec	1	8/16/2022 9:55:05 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/16/2022 9:55:05 PM
Surr: BFB	121	70-130		%Rec	1	8/16/2022 9:55:05 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 11 of 24

Analytical Report

Lab Order 2208875

Date Reported: 8/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: WES22-17 4'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/11/2022 10:55:00 AM

Lab ID: 2208875-012

Matrix: SOIL

Received Date: 8/13/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	8/17/2022 10:13:40 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/17/2022 10:13:40 AM
Surr: DNOP	101	21-129		%Rec	1	8/17/2022 10:13:40 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	61		mg/Kg	20	8/16/2022 8:42:52 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: BRM
Benzene	ND	0.024		mg/Kg	1	8/17/2022 12:46:56 AM
Toluene	ND	0.048		mg/Kg	1	8/17/2022 12:46:56 AM
Ethylbenzene	ND	0.048		mg/Kg	1	8/17/2022 12:46:56 AM
Xylenes, Total	ND	0.095		mg/Kg	1	8/17/2022 12:46:56 AM
Surr: 1,2-Dichloroethane-d4	107	70-130		%Rec	1	8/17/2022 12:46:56 AM
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	8/17/2022 12:46:56 AM
Surr: Dibromofluoromethane	117	70-130		%Rec	1	8/17/2022 12:46:56 AM
Surr: Toluene-d8	101	70-130		%Rec	1	8/17/2022 12:46:56 AM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/17/2022 12:46:56 AM
Surr: BFB	116	70-130		%Rec	1	8/17/2022 12:46:56 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 12 of 24

Analytical Report

Lab Order 2208875

Date Reported: 8/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-09 6'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/11/2022 11:00:00 AM

Lab ID: 2208875-013

Matrix: SOIL

Received Date: 8/13/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	25	14		mg/Kg	1	8/17/2022 10:55:21 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/17/2022 10:55:21 AM
Surr: DNOP	89.5	21-129		%Rec	1	8/17/2022 10:55:21 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	1600	60		mg/Kg	20	8/16/2022 8:55:12 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: BRM
Benzene	ND	0.024		mg/Kg	1	8/17/2022 1:15:31 AM
Toluene	ND	0.047		mg/Kg	1	8/17/2022 1:15:31 AM
Ethylbenzene	ND	0.047		mg/Kg	1	8/17/2022 1:15:31 AM
Xylenes, Total	ND	0.095		mg/Kg	1	8/17/2022 1:15:31 AM
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	8/17/2022 1:15:31 AM
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	8/17/2022 1:15:31 AM
Surr: Dibromofluoromethane	115	70-130		%Rec	1	8/17/2022 1:15:31 AM
Surr: Toluene-d8	98.6	70-130		%Rec	1	8/17/2022 1:15:31 AM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/17/2022 1:15:31 AM
Surr: BFB	120	70-130		%Rec	1	8/17/2022 1:15:31 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 13 of 24

Analytical Report

Lab Order 2208875

Date Reported: 8/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-10 6'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/11/2022 11:05:00 AM

Lab ID: 2208875-014

Matrix: SOIL

Received Date: 8/13/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	100	15		mg/Kg	1	8/17/2022 9:54:52 AM
Motor Oil Range Organics (MRO)	62	50		mg/Kg	1	8/17/2022 9:54:52 AM
Surr: DNOP	95.5	21-129		%Rec	1	8/17/2022 9:54:52 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	1800	60		mg/Kg	20	8/16/2022 9:07:33 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: BRM
Benzene	ND	0.024		mg/Kg	1	8/17/2022 1:44:03 AM
Toluene	ND	0.048		mg/Kg	1	8/17/2022 1:44:03 AM
Ethylbenzene	ND	0.048		mg/Kg	1	8/17/2022 1:44:03 AM
Xylenes, Total	ND	0.095		mg/Kg	1	8/17/2022 1:44:03 AM
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	8/17/2022 1:44:03 AM
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	8/17/2022 1:44:03 AM
Surr: Dibromofluoromethane	119	70-130		%Rec	1	8/17/2022 1:44:03 AM
Surr: Toluene-d8	99.3	70-130		%Rec	1	8/17/2022 1:44:03 AM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/17/2022 1:44:03 AM
Surr: BFB	117	70-130		%Rec	1	8/17/2022 1:44:03 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 14 of 24

Analytical Report

Lab Order 2208875

Date Reported: 8/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-11 6'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/11/2022 11:10:00 AM

Lab ID: 2208875-015

Matrix: SOIL

Received Date: 8/13/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/17/2022 10:18:35 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/17/2022 10:18:35 AM
Surr: DNOP	93.4	21-129		%Rec	1	8/17/2022 10:18:35 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	110	59		mg/Kg	20	8/16/2022 9:19:54 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: BRM
Benzene	ND	0.025		mg/Kg	1	8/17/2022 2:12:39 AM
Toluene	ND	0.049		mg/Kg	1	8/17/2022 2:12:39 AM
Ethylbenzene	ND	0.049		mg/Kg	1	8/17/2022 2:12:39 AM
Xylenes, Total	ND	0.098		mg/Kg	1	8/17/2022 2:12:39 AM
Surr: 1,2-Dichloroethane-d4	111	70-130		%Rec	1	8/17/2022 2:12:39 AM
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	8/17/2022 2:12:39 AM
Surr: Dibromofluoromethane	120	70-130		%Rec	1	8/17/2022 2:12:39 AM
Surr: Toluene-d8	99.3	70-130		%Rec	1	8/17/2022 2:12:39 AM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/17/2022 2:12:39 AM
Surr: BFB	114	70-130		%Rec	1	8/17/2022 2:12:39 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 15 of 24

Analytical Report

Lab Order 2208875

Date Reported: 8/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-12 6'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/11/2022 11:15:00 AM

Lab ID: 2208875-016

Matrix: SOIL

Received Date: 8/13/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	8/16/2022 11:15:48 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/16/2022 11:15:48 AM
Surr: DNOP	89.6	21-129		%Rec	1	8/16/2022 11:15:48 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/17/2022 2:11:02 PM
Surr: BFB	105	37.7-212		%Rec	1	8/17/2022 2:11:02 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	8/16/2022 8:26:29 PM
Toluene	ND	0.050		mg/Kg	1	8/16/2022 8:26:29 PM
Ethylbenzene	ND	0.050		mg/Kg	1	8/16/2022 8:26:29 PM
Xylenes, Total	ND	0.099		mg/Kg	1	8/16/2022 8:26:29 PM
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	8/16/2022 8:26:29 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	8/16/2022 9:32:15 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 16 of 24

Analytical Report

Lab Order 2208875

Date Reported: 8/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-13 6'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/11/2022 11:20:00 AM

Lab ID: 2208875-017

Matrix: SOIL

Received Date: 8/13/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	8/16/2022 11:29:49 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/16/2022 11:29:49 AM
Surr: DNOP	93.1	21-129		%Rec	1	8/16/2022 11:29:49 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/17/2022 2:34:48 PM
Surr: BFB	108	37.7-212		%Rec	1	8/17/2022 2:34:48 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	8/16/2022 9:37:14 PM
Toluene	ND	0.049		mg/Kg	1	8/16/2022 9:37:14 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/16/2022 9:37:14 PM
Xylenes, Total	ND	0.098		mg/Kg	1	8/16/2022 9:37:14 PM
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	8/16/2022 9:37:14 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	97	60		mg/Kg	20	8/16/2022 10:09:17 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 17 of 24

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2208875

22-Aug-22

Client: Devon Energy
Project: Onyx 29 CTB1 Separator

Sample ID: MB-69543	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 69543	RunNo: 90330								
Prep Date: 8/16/2022	Analysis Date: 8/16/2022	SeqNo: 3222397 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-69543	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 69543	RunNo: 90330								
Prep Date: 8/16/2022	Analysis Date: 8/16/2022	SeqNo: 3222398 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	97.1	90	110			

Sample ID: MB-69530	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 69530	RunNo: 90309								
Prep Date: 8/16/2022	Analysis Date: 8/16/2022	SeqNo: 3222751 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-69530	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 69530	RunNo: 90309								
Prep Date: 8/16/2022	Analysis Date: 8/16/2022	SeqNo: 3222752 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.0	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Page 18 of 24

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2208875

22-Aug-22

Client: Devon Energy
Project: Onyx 29 CTB1 Separator

Sample ID: MB-69521	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 69521	RunNo: 90276								
Prep Date: 8/16/2022	Analysis Date: 8/16/2022	SeqNo: 3221703 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.8		10.00		87.7	21	129			

Sample ID: LCS-69521	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 69521	RunNo: 90276								
Prep Date: 8/16/2022	Analysis Date: 8/16/2022	SeqNo: 3221704 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43	15	50.00	0	86.6	64.4	127			
Surr: DNOP	3.6		5.000		72.9	21	129			

Sample ID: MB-69519	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 69519	RunNo: 90333								
Prep Date: 8/15/2022	Analysis Date: 8/17/2022	SeqNo: 3222874 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.7		10.00		86.9	21	129			

Sample ID: LCS-69519	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 69519	RunNo: 90333								
Prep Date: 8/15/2022	Analysis Date: 8/17/2022	SeqNo: 3222875 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	15	50.00	0	87.6	64.4	127			
Surr: DNOP	4.2		5.000		84.4	21	129			

Sample ID: 2208875-002AMS	SampType: MS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: WES22-12 4'	Batch ID: 69519	RunNo: 90347								
Prep Date: 8/15/2022	Analysis Date: 8/17/2022	SeqNo: 3226236 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	57	15	48.83	14.00	88.3	36.1	154			
Surr: DNOP	6.6		4.883		134	21	129			S

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 2208875
22-Aug-22

Client: Devon Energy
Project: Onyx 29 CTB1 Separator

Sample ID: 2208875-002AMSD		SampType: MSD		TestCode: EPA Method 8015M/D: Diesel Range Organics						
Client ID: WES22-12 4'		Batch ID: 69519		RunNo: 90347						
Prep Date: 8/15/2022		Analysis Date: 8/17/2022		SeqNo: 3226237		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51	15	48.88	14.00	75.4	36.1	154	11.6	33.9	
Surr: DNOP	5.8		4.888		118	21	129	0	0	

Qualifiers:

- *

Value exceeds Maximum Contaminant Level.
- D

Sample Diluted Due to Matrix
- H

Holding times for preparation or analysis exceeded
- ND

Not Detected at the Reporting Limit
- PQL

Practical Quantitative Limit
- S

% Recovery outside of range due to dilution or matrix interference
- B

Analyte detected in the associated Method Blank
- E

Estimated value
- J

Analyte detected below quantitation limits
- P

Sample pH Not In Range
- RL

Reporting Limit

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2208875

22-Aug-22

Client: Devon Energy
Project: Onyx 29 CTB1 Separator

Sample ID: mb-69518	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 69518	RunNo: 90345								
Prep Date: 8/15/2022	Analysis Date: 8/17/2022	SeqNo: 3223615 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		105	37.7	212			

Sample ID: lcs-69518	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 69518	RunNo: 90345								
Prep Date: 8/15/2022	Analysis Date: 8/17/2022	SeqNo: 3223616 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	104	72.3	137			
Surr: BFB	2100		1000		210	37.7	212			

Sample ID: 2208875-016ams	SampType: MS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: BES22-12 6'	Batch ID: 69518	RunNo: 90345								
Prep Date: 8/15/2022	Analysis Date: 8/17/2022	SeqNo: 3223618 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	4.8	24.18	0	116	70	130			
Surr: BFB	2100		967.1		221	37.7	212			S

Sample ID: 2208875-016amsd	SampType: MSD	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: BES22-12 6'	Batch ID: 69518	RunNo: 90345								
Prep Date: 8/15/2022	Analysis Date: 8/17/2022	SeqNo: 3223619 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	4.9	24.61	0	108	70	130	5.30	20	
Surr: BFB	2100		984.3		215	37.7	212	0	0	S

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2208875

22-Aug-22

Client: Devon Energy
Project: Onyx 29 CTB1 Separator

Sample ID: mb-69518	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 69518	RunNo: 90310								
Prep Date: 8/15/2022	Analysis Date: 8/16/2022	SeqNo: 3222136 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		105	70	130			

Sample ID: LCS-69518	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 69518	RunNo: 90310								
Prep Date: 8/15/2022	Analysis Date: 8/16/2022	SeqNo: 3222137 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.025	1.000	0	93.4	80	120			
Toluene	0.97	0.050	1.000	0	96.8	80	120			
Ethylbenzene	0.97	0.050	1.000	0	97.1	80	120			
Xylenes, Total	2.9	0.10	3.000	0	96.7	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		108	70	130			

Sample ID: 2208875-017ams	SampType: MS	TestCode: EPA Method 8021B: Volatiles								
Client ID: BES22-13 6'	Batch ID: 69518	RunNo: 90310								
Prep Date: 8/15/2022	Analysis Date: 8/16/2022	SeqNo: 3222140 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.024	0.9542	0	109	68.8	120			
Toluene	1.1	0.048	0.9542	0	114	73.6	124			
Ethylbenzene	1.1	0.048	0.9542	0	115	72.7	129			
Xylenes, Total	3.3	0.095	2.863	0	115	75.7	126			
Surr: 4-Bromofluorobenzene	1.0		0.9542		107	70	130			

Sample ID: 2208875-017amsd	SampType: MSD	TestCode: EPA Method 8021B: Volatiles								
Client ID: BES22-13 6'	Batch ID: 69518	RunNo: 90310								
Prep Date: 8/15/2022	Analysis Date: 8/16/2022	SeqNo: 3222141 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.98	0.024	0.9524	0	103	68.8	120	6.28	20	
Toluene	1.0	0.048	0.9524	0	107	73.6	124	6.63	20	
Ethylbenzene	1.0	0.048	0.9524	0	108	72.7	129	6.97	20	
Xylenes, Total	3.1	0.095	2.857	0	107	75.7	126	7.46	20	
Surr: 4-Bromofluorobenzene	1.0		0.9524		107	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2208875

22-Aug-22

Client: Devon Energy
Project: Onyx 29 CTB1 Separator

Sample ID: lcs-69509	SampType: LCS4	TestCode: EPA Method 8260B: Volatiles Short List								
Client ID: BatchQC	Batch ID: 69509	RunNo: 90315								
Prep Date: 8/15/2022	Analysis Date: 8/16/2022	SeqNo: 3222198	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.96	0.025	1.000	0	96.1	80	120			
Toluene	0.94	0.050	1.000	0	93.5	80	120			
Ethylbenzene	0.91	0.050	1.000	0	90.6	80	120			
Xylenes, Total	2.9	0.10	3.000	0	96.9	80	120			
Surr: 1,2-Dichloroethane-d4	0.53		0.5000		106	70	130			
Surr: 4-Bromofluorobenzene	0.53		0.5000		107	70	130			
Surr: Dibromofluoromethane	0.60		0.5000		120	70	130			
Surr: Toluene-d8	0.50		0.5000		99.2	70	130			

Sample ID: mb-69509	SampType: MBLK	TestCode: EPA Method 8260B: Volatiles Short List								
Client ID: PBS	Batch ID: 69509	RunNo: 90315								
Prep Date: 8/15/2022	Analysis Date: 8/16/2022	SeqNo: 3222199	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 1,2-Dichloroethane-d4	0.52		0.5000		104	70	130			
Surr: 4-Bromofluorobenzene	0.52		0.5000		103	70	130			
Surr: Dibromofluoromethane	0.60		0.5000		120	70	130			
Surr: Toluene-d8	0.50		0.5000		99.7	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2208875

22-Aug-22

Client: Devon Energy
Project: Onyx 29 CTB1 Separator

Sample ID: lcs-69509	SampType: LCS	TestCode: EPA Method 8015D Mod: Gasoline Range								
Client ID: LCSS	Batch ID: 69509	RunNo: 90315								
Prep Date: 8/15/2022	Analysis Date: 8/16/2022	SeqNo: 3222224 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	95.1	70	130			
Surr: BFB	580		500.0		115	70	130			

Sample ID: mb-69509	SampType: MBLK	TestCode: EPA Method 8015D Mod: Gasoline Range								
Client ID: PBS	Batch ID: 69509	RunNo: 90315								
Prep Date: 8/15/2022	Analysis Date: 8/16/2022	SeqNo: 3222225 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	590		500.0		118	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

Page 24 of 24



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Devon Energy

Work Order Number: 2208875

RcptNo: 1

Received By: Juan Rojas

8/13/2022 7:40:00 AM

Juan Rojas

Completed By: Juan Rojas

8/13/2022 9:01:05 AM

*Juan Rojas*Reviewed By: *TME*

8/13/22

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☐ No ☐ NA ☒
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH:

(<2 or >12 unless noted)

Adjusted? _____

Checked by: *jnr8/13/22*

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.5	Good				

Chain-of-Custody Record

Client:

Devon/Vertex

Mailing Address:

ON FILE

Phone #:

email or Fax#:

QA/QC Package:

☐ Standard☐ Level 4 (Full Validation)Accreditation: ☐ Az Compliance☐ NELAC ☐ Other☐ EDD (Type)

Turn-Around Time: 2-3 days

☐ Standard☒ Rush

Project Name:

Oxy 29 CTR 1 (separator)

Project #:

22E-01720-002

Project Manager:

Kent Stalling

Sampler: C1

On Ice: ☐ Yes ☐ No

of Coolers: 1

Cooler Temp (including CF): 20.4 to 1-0.5 (°C)

Container Type and #

Preservative Type

HEAL No.

2205875

Ice

-001

-002

-003

-004

-005

-006

-007

-008

-009

-010

-011

-012

-013

-014

-015

-016

-017

-018

-019

-020

-021

-022

-023

-024

-025

-026

-027

-028

-029

-030

-031

-032

-033

-034

-035

-036

-037

-038

-039

-040

-041

-042

-043

-044

-045

-046

-047

-048

-049

-050

-051

-052

-053

-054

-055

-056

-057

-058

-059

-060

-061

-062

-063

-064

-065

-066

-067

-068

-069

-070

-071

-072

-073

-074

-075

-076

-077

-078

-079

-080

-081

-082

-083

-084

-085

-086

-087

-088

-089

-090

-091

-092

-093

-094

-095

-096

-097

-098

-099

-100

-101

-102

-103

-104

-105

-106

-107

-108

-109

-110

-111

-112

-113

-114

-115

-116

-117

-118

-119

-120

-121

-122

-123

-124

-125

-126

-127

-128

-129

-130

-131

-132

-133

-134

-135

-136

-137

-138

-139

-140

-141

-142

-143

-144

-145

-146

-147

-148

-149

-150

-151

-152

-153

-154

-155

-156

-157

-158

-159

-160

-161

-162

-163

-164

-165

-166

-167

-168

-169

-170

-171

-172

-173

-174

-175

-176

-177

-178

-179

-180

-181

-182

-183

-184

-185

-186

-187

-188

-189

-190

-191

-192

-193

-194

-195

-196

-197

-198

-199

-200

-201

-202

-203

-204

-205

-206

-207

-208

-209

-210

-211

-212

-213

-214

-215

-216

-217

-218

-219

-220

-221

-222

-223

-224

-225

-226

-227

-228

-229

-230

-231

-232

-233

-234

-235

-236

-237

-238

-239

-240

-241

-242

-243

-244

-245

-246

-247

-248

-249

-250

-251

-252

-253

-254

-255

-256

-257

-258

-259

-260

-261

-262

-263

-264

-265

-266

-267

-268

-269

-270

-271

-272

-273

-274

-275

-276

-277

-278

-279

-280

-281

-282

-283

-284

-285

-286

-287

-288

-289

-290

-291

-292

-293

-294

-295

-296

-297

-298

-299

-300

-301

-302

-303

-304

-305

-306

-307

-308

-309

-310

-311

-312

-313

-314

-315

-316

-317

-318

-319

-320

-321

-322

-323

-324

-325

-326

-327

-328

Analytical Report

Lab Order 2208917

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-19 2'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/12/2022 1:00:00 PM

Lab ID: 2208917-001

Matrix: SOIL

Received Date: 8/16/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	8/17/2022 10:26:43 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/17/2022 10:26:43 PM
Surr: DNOP	101	21-129		%Rec	1	8/17/2022 10:26:43 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	140	60		mg/Kg	20	8/17/2022 8:45:28 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.024		mg/Kg	1	8/17/2022 12:59:27 PM
Toluene	ND	0.048		mg/Kg	1	8/17/2022 12:59:27 PM
Ethylbenzene	ND	0.048		mg/Kg	1	8/17/2022 12:59:27 PM
Xylenes, Total	ND	0.096		mg/Kg	1	8/17/2022 12:59:27 PM
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	1	8/17/2022 12:59:27 PM
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	8/17/2022 12:59:27 PM
Surr: Dibromofluoromethane	121	70-130		%Rec	1	8/17/2022 12:59:27 PM
Surr: Toluene-d8	97.7	70-130		%Rec	1	8/17/2022 12:59:27 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/17/2022 12:59:27 PM
Surr: BFB	122	70-130		%Rec	1	8/17/2022 12:59:27 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 1 of 0

Analytical Report

Lab Order 2208917

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-21 2'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/12/2022 1:10:00 PM

Lab ID: 2208917-002

Matrix: SOIL

Received Date: 8/16/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/17/2022 10:42:38 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/17/2022 10:42:38 PM
Surr: DNOP	94.9	21-129		%Rec	1	8/17/2022 10:42:38 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	100	59		mg/Kg	20	8/17/2022 8:57:49 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.024		mg/Kg	1	8/17/2022 2:25:40 PM
Toluene	ND	0.048		mg/Kg	1	8/17/2022 2:25:40 PM
Ethylbenzene	ND	0.048		mg/Kg	1	8/17/2022 2:25:40 PM
Xylenes, Total	ND	0.096		mg/Kg	1	8/17/2022 2:25:40 PM
Surr: 1,2-Dichloroethane-d4	109	70-130		%Rec	1	8/17/2022 2:25:40 PM
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	8/17/2022 2:25:40 PM
Surr: Dibromofluoromethane	121	70-130		%Rec	1	8/17/2022 2:25:40 PM
Surr: Toluene-d8	98.8	70-130		%Rec	1	8/17/2022 2:25:40 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/17/2022 2:25:40 PM
Surr: BFB	118	70-130		%Rec	1	8/17/2022 2:25:40 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 2 of 0

Analytical Report

Lab Order 2208917

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-25 2'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/12/2022 1:20:00 PM

Lab ID: 2208917-003

Matrix: SOIL

Received Date: 8/16/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	8/17/2022 10:58:16 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/17/2022 10:58:16 PM
Surr: DNOP	93.2	21-129		%Rec	1	8/17/2022 10:58:16 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	120	60		mg/Kg	20	8/17/2022 9:10:10 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.024		mg/Kg	1	8/17/2022 3:52:03 PM
Toluene	ND	0.049		mg/Kg	1	8/17/2022 3:52:03 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/17/2022 3:52:03 PM
Xylenes, Total	ND	0.097		mg/Kg	1	8/17/2022 3:52:03 PM
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	8/17/2022 3:52:03 PM
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	8/17/2022 3:52:03 PM
Surr: Dibromofluoromethane	118	70-130		%Rec	1	8/17/2022 3:52:03 PM
Surr: Toluene-d8	94.9	70-130		%Rec	1	8/17/2022 3:52:03 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/17/2022 3:52:03 PM
Surr: BFB	117	70-130		%Rec	1	8/17/2022 3:52:03 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 3 of 0



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

August 23, 2022

Kent Stallings

Vertex Resources Services, Inc.

3101 Boyd Drive

Carlsbad, NM 88220

TEL: (505) 506-0040

FAX:

RE: Onyx 29 CTB1 Separator

OrderNo.: 2208A05

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 20 sample(s) on 8/17/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order 2208A05

Date Reported: 8/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-26 2'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/15/2022 9:00:00 AM

Lab ID: 2208A05-001

Matrix: SOIL

Received Date: 8/17/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/18/2022 5:05:39 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/18/2022 5:05:39 PM
Surr: DNOP	105	21-129		%Rec	1	8/18/2022 5:05:39 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	140	60		mg/Kg	20	8/18/2022 2:36:24 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.025		mg/Kg	1	8/18/2022 12:27:18 PM
Toluene	ND	0.050		mg/Kg	1	8/18/2022 12:27:18 PM
Ethylbenzene	ND	0.050		mg/Kg	1	8/18/2022 12:27:18 PM
Xylenes, Total	ND	0.10		mg/Kg	1	8/18/2022 12:27:18 PM
Surr: 1,2-Dichloroethane-d4	109	70-130		%Rec	1	8/18/2022 12:27:18 PM
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	8/18/2022 12:27:18 PM
Surr: Dibromofluoromethane	118	70-130		%Rec	1	8/18/2022 12:27:18 PM
Surr: Toluene-d8	102	70-130		%Rec	1	8/18/2022 12:27:18 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/18/2022 12:27:18 PM
Surr: BFB	122	70-130		%Rec	1	8/18/2022 12:27:18 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2208A05

Date Reported: 8/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-27 2'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/15/2022 9:05:00 AM

Lab ID: 2208A05-002

Matrix: SOIL

Received Date: 8/17/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	8/18/2022 5:49:07 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/18/2022 5:49:07 PM
Surr: DNOP	59.3	21-129		%Rec	1	8/18/2022 5:49:07 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	68	60		mg/Kg	20	8/18/2022 3:38:28 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.024		mg/Kg	1	8/18/2022 1:53:19 PM
Toluene	ND	0.049		mg/Kg	1	8/18/2022 1:53:19 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/18/2022 1:53:19 PM
Xylenes, Total	ND	0.098		mg/Kg	1	8/18/2022 1:53:19 PM
Surr: 1,2-Dichloroethane-d4	110	70-130		%Rec	1	8/18/2022 1:53:19 PM
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	8/18/2022 1:53:19 PM
Surr: Dibromofluoromethane	120	70-130		%Rec	1	8/18/2022 1:53:19 PM
Surr: Toluene-d8	101	70-130		%Rec	1	8/18/2022 1:53:19 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/18/2022 1:53:19 PM
Surr: BFB	120	70-130		%Rec	1	8/18/2022 1:53:19 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 2 of 25

Analytical Report

Lab Order 2208A05

Date Reported: 8/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-28 2'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/15/2022 9:10:00 AM

Lab ID: 2208A05-003

Matrix: SOIL

Received Date: 8/17/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/18/2022 6:04:09 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/18/2022 6:04:09 PM
Surr: DNOP	95.0	21-129		%Rec	1	8/18/2022 6:04:09 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	8/18/2022 4:15:41 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.025		mg/Kg	1	8/18/2022 3:19:30 PM
Toluene	ND	0.050		mg/Kg	1	8/18/2022 3:19:30 PM
Ethylbenzene	ND	0.050		mg/Kg	1	8/18/2022 3:19:30 PM
Xylenes, Total	ND	0.099		mg/Kg	1	8/18/2022 3:19:30 PM
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	1	8/18/2022 3:19:30 PM
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	8/18/2022 3:19:30 PM
Surr: Dibromofluoromethane	120	70-130		%Rec	1	8/18/2022 3:19:30 PM
Surr: Toluene-d8	99.3	70-130		%Rec	1	8/18/2022 3:19:30 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/18/2022 3:19:30 PM
Surr: BFB	122	70-130		%Rec	1	8/18/2022 3:19:30 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 3 of 25

Analytical Report

Lab Order 2208A05

Date Reported: 8/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-29 2'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/15/2022 9:15:00 AM

Lab ID: 2208A05-004

Matrix: SOIL

Received Date: 8/17/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/18/2022 6:19:19 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/18/2022 6:19:19 PM
Surr: DNOP	92.6	21-129		%Rec	1	8/18/2022 6:19:19 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	8/20/2022 2:57:23 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.024		mg/Kg	1	8/18/2022 3:48:12 PM
Toluene	ND	0.048		mg/Kg	1	8/18/2022 3:48:12 PM
Ethylbenzene	ND	0.048		mg/Kg	1	8/18/2022 3:48:12 PM
Xylenes, Total	ND	0.095		mg/Kg	1	8/18/2022 3:48:12 PM
Surr: 1,2-Dichloroethane-d4	108	70-130		%Rec	1	8/18/2022 3:48:12 PM
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	8/18/2022 3:48:12 PM
Surr: Dibromofluoromethane	122	70-130		%Rec	1	8/18/2022 3:48:12 PM
Surr: Toluene-d8	96.0	70-130		%Rec	1	8/18/2022 3:48:12 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/18/2022 3:48:12 PM
Surr: BFB	115	70-130		%Rec	1	8/18/2022 3:48:12 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 4 of 25

Analytical Report

Lab Order 2208A05

Date Reported: 8/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-30 2'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/15/2022 9:20:00 AM

Lab ID: 2208A05-005

Matrix: SOIL

Received Date: 8/17/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/18/2022 6:34:52 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/18/2022 6:34:52 PM
Surr: DNOP	93.4	21-129		%Rec	1	8/18/2022 6:34:52 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	150	60		mg/Kg	20	8/20/2022 3:59:26 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.024		mg/Kg	1	8/18/2022 4:16:52 PM
Toluene	ND	0.048		mg/Kg	1	8/18/2022 4:16:52 PM
Ethylbenzene	ND	0.048		mg/Kg	1	8/18/2022 4:16:52 PM
Xylenes, Total	ND	0.095		mg/Kg	1	8/18/2022 4:16:52 PM
Surr: 1,2-Dichloroethane-d4	110	70-130		%Rec	1	8/18/2022 4:16:52 PM
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	8/18/2022 4:16:52 PM
Surr: Dibromofluoromethane	123	70-130		%Rec	1	8/18/2022 4:16:52 PM
Surr: Toluene-d8	98.7	70-130		%Rec	1	8/18/2022 4:16:52 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/18/2022 4:16:52 PM
Surr: BFB	119	70-130		%Rec	1	8/18/2022 4:16:52 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 5 of 25

Analytical Report

Lab Order 2208A05

Date Reported: 8/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-31 2'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/15/2022 9:25:00 AM

Lab ID: 2208A05-006

Matrix: SOIL

Received Date: 8/17/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/18/2022 6:50:16 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/18/2022 6:50:16 PM
Surr: DNOP	85.4	21-129		%Rec	1	8/18/2022 6:50:16 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	71	60		mg/Kg	20	8/20/2022 4:11:51 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.024		mg/Kg	1	8/18/2022 4:45:35 PM
Toluene	ND	0.049		mg/Kg	1	8/18/2022 4:45:35 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/18/2022 4:45:35 PM
Xylenes, Total	ND	0.097		mg/Kg	1	8/18/2022 4:45:35 PM
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	1	8/18/2022 4:45:35 PM
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	8/18/2022 4:45:35 PM
Surr: Dibromofluoromethane	116	70-130		%Rec	1	8/18/2022 4:45:35 PM
Surr: Toluene-d8	98.7	70-130		%Rec	1	8/18/2022 4:45:35 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/18/2022 4:45:35 PM
Surr: BFB	121	70-130		%Rec	1	8/18/2022 4:45:35 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 6 of 25

Analytical Report

Lab Order 2208A05

Date Reported: 8/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-32 2'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/15/2022 9:30:00 AM

Lab ID: 2208A05-007

Matrix: SOIL

Received Date: 8/17/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/18/2022 7:05:35 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/18/2022 7:05:35 PM
Surr: DNOP	103	21-129		%Rec	1	8/18/2022 7:05:35 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	120	60		mg/Kg	20	8/20/2022 4:24:16 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.024		mg/Kg	1	8/18/2022 5:14:14 PM
Toluene	ND	0.049		mg/Kg	1	8/18/2022 5:14:14 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/18/2022 5:14:14 PM
Xylenes, Total	ND	0.097		mg/Kg	1	8/18/2022 5:14:14 PM
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	8/18/2022 5:14:14 PM
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	8/18/2022 5:14:14 PM
Surr: Dibromofluoromethane	120	70-130		%Rec	1	8/18/2022 5:14:14 PM
Surr: Toluene-d8	100	70-130		%Rec	1	8/18/2022 5:14:14 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/18/2022 5:14:14 PM
Surr: BFB	118	70-130		%Rec	1	8/18/2022 5:14:14 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 7 of 25

Analytical Report

Lab Order 2208A05

Date Reported: 8/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-15 4'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/15/2022 9:35:00 AM

Lab ID: 2208A05-008

Matrix: SOIL

Received Date: 8/17/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/18/2022 7:21:14 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/18/2022 7:21:14 PM
Surr: DNOP	119	21-129		%Rec	1	8/18/2022 7:21:14 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	200	60		mg/Kg	20	8/20/2022 4:36:41 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.024		mg/Kg	1	8/18/2022 5:42:49 PM
Toluene	ND	0.047		mg/Kg	1	8/18/2022 5:42:49 PM
Ethylbenzene	ND	0.047		mg/Kg	1	8/18/2022 5:42:49 PM
Xylenes, Total	ND	0.095		mg/Kg	1	8/18/2022 5:42:49 PM
Surr: 1,2-Dichloroethane-d4	110	70-130		%Rec	1	8/18/2022 5:42:49 PM
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	8/18/2022 5:42:49 PM
Surr: Dibromofluoromethane	118	70-130		%Rec	1	8/18/2022 5:42:49 PM
Surr: Toluene-d8	100	70-130		%Rec	1	8/18/2022 5:42:49 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/18/2022 5:42:49 PM
Surr: BFB	119	70-130		%Rec	1	8/18/2022 5:42:49 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 8 of 25

Analytical Report

Lab Order 2208A05

Date Reported: 8/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-16 4'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/15/2022 9:40:00 AM

Lab ID: 2208A05-009

Matrix: SOIL

Received Date: 8/17/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/18/2022 7:36:33 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/18/2022 7:36:33 PM
Surr: DNOP	92.9	21-129		%Rec	1	8/18/2022 7:36:33 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	460	60		mg/Kg	20	8/20/2022 4:49:05 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.024		mg/Kg	1	8/18/2022 6:11:26 PM
Toluene	ND	0.049		mg/Kg	1	8/18/2022 6:11:26 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/18/2022 6:11:26 PM
Xylenes, Total	ND	0.097		mg/Kg	1	8/18/2022 6:11:26 PM
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	1	8/18/2022 6:11:26 PM
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	8/18/2022 6:11:26 PM
Surr: Dibromofluoromethane	118	70-130		%Rec	1	8/18/2022 6:11:26 PM
Surr: Toluene-d8	102	70-130		%Rec	1	8/18/2022 6:11:26 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/18/2022 6:11:26 PM
Surr: BFB	120	70-130		%Rec	1	8/18/2022 6:11:26 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 9 of 25

Analytical Report

Lab Order 2208A05

Date Reported: 8/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-17 4'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/15/2022 9:45:00 AM

Lab ID: 2208A05-010

Matrix: SOIL

Received Date: 8/17/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/18/2022 7:52:10 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/18/2022 7:52:10 PM
Surr: DNOP	108	21-129		%Rec	1	8/18/2022 7:52:10 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	83	60		mg/Kg	20	8/20/2022 5:01:30 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.025		mg/Kg	1	8/18/2022 6:40:02 PM
Toluene	ND	0.050		mg/Kg	1	8/18/2022 6:40:02 PM
Ethylbenzene	ND	0.050		mg/Kg	1	8/18/2022 6:40:02 PM
Xylenes, Total	ND	0.10		mg/Kg	1	8/18/2022 6:40:02 PM
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	8/18/2022 6:40:02 PM
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	8/18/2022 6:40:02 PM
Surr: Dibromofluoromethane	118	70-130		%Rec	1	8/18/2022 6:40:02 PM
Surr: Toluene-d8	98.6	70-130		%Rec	1	8/18/2022 6:40:02 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/18/2022 6:40:02 PM
Surr: BFB	121	70-130		%Rec	1	8/18/2022 6:40:02 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2208A05

Date Reported: 8/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-18 4'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/15/2022 9:50:00 AM

Lab ID: 2208A05-011

Matrix: SOIL

Received Date: 8/17/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	8/18/2022 8:07:19 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/18/2022 8:07:19 PM
Surr: DNOP	76.5	21-129		%Rec	1	8/18/2022 8:07:19 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	64	60		mg/Kg	20	8/18/2022 5:18:21 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.024		mg/Kg	1	8/18/2022 7:08:43 PM
Toluene	ND	0.048		mg/Kg	1	8/18/2022 7:08:43 PM
Ethylbenzene	ND	0.048		mg/Kg	1	8/18/2022 7:08:43 PM
Xylenes, Total	ND	0.097		mg/Kg	1	8/18/2022 7:08:43 PM
Surr: 1,2-Dichloroethane-d4	107	70-130		%Rec	1	8/18/2022 7:08:43 PM
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	8/18/2022 7:08:43 PM
Surr: Dibromofluoromethane	116	70-130		%Rec	1	8/18/2022 7:08:43 PM
Surr: Toluene-d8	101	70-130		%Rec	1	8/18/2022 7:08:43 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/18/2022 7:08:43 PM
Surr: BFB	118	70-130		%Rec	1	8/18/2022 7:08:43 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2208A05

Date Reported: 8/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-19 4'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/15/2022 9:55:00 AM

Lab ID: 2208A05-012

Matrix: SOIL

Received Date: 8/17/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/18/2022 8:22:35 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/18/2022 8:22:35 PM
Surr: DNOP	101	21-129		%Rec	1	8/18/2022 8:22:35 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	260	60		mg/Kg	20	8/18/2022 6:20:04 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.025		mg/Kg	1	8/18/2022 7:37:18 PM
Toluene	ND	0.049		mg/Kg	1	8/18/2022 7:37:18 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/18/2022 7:37:18 PM
Xylenes, Total	ND	0.098		mg/Kg	1	8/18/2022 7:37:18 PM
Surr: 1,2-Dichloroethane-d4	108	70-130		%Rec	1	8/18/2022 7:37:18 PM
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	8/18/2022 7:37:18 PM
Surr: Dibromofluoromethane	122	70-130		%Rec	1	8/18/2022 7:37:18 PM
Surr: Toluene-d8	98.9	70-130		%Rec	1	8/18/2022 7:37:18 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/18/2022 7:37:18 PM
Surr: BFB	118	70-130		%Rec	1	8/18/2022 7:37:18 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 12 of 25

Analytical Report

Lab Order 2208A05

Date Reported: 8/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-20 4'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/15/2022 10:00:00 AM

Lab ID: 2208A05-013

Matrix: SOIL

Received Date: 8/17/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	8/18/2022 8:37:46 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/18/2022 8:37:46 PM
Surr: DNOP	86.5	21-129		%Rec	1	8/18/2022 8:37:46 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	130	60		mg/Kg	20	8/18/2022 6:57:06 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.025		mg/Kg	1	8/18/2022 8:05:54 PM
Toluene	ND	0.050		mg/Kg	1	8/18/2022 8:05:54 PM
Ethylbenzene	ND	0.050		mg/Kg	1	8/18/2022 8:05:54 PM
Xylenes, Total	ND	0.099		mg/Kg	1	8/18/2022 8:05:54 PM
Surr: 1,2-Dichloroethane-d4	110	70-130		%Rec	1	8/18/2022 8:05:54 PM
Surr: 4-Bromofluorobenzene	108	70-130		%Rec	1	8/18/2022 8:05:54 PM
Surr: Dibromofluoromethane	116	70-130		%Rec	1	8/18/2022 8:05:54 PM
Surr: Toluene-d8	98.4	70-130		%Rec	1	8/18/2022 8:05:54 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/18/2022 8:05:54 PM
Surr: BFB	120	70-130		%Rec	1	8/18/2022 8:05:54 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2208A05

Date Reported: 8/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-21 4'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/15/2022 10:05:00 AM

Lab ID: 2208A05-014

Matrix: SOIL

Received Date: 8/17/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	13		mg/Kg	1	8/18/2022 8:52:56 PM
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	8/18/2022 8:52:56 PM
Surr: DNOP	84.3	21-129		%Rec	1	8/18/2022 8:52:56 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	85	60		mg/Kg	20	8/18/2022 7:09:27 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.024		mg/Kg	1	8/18/2022 8:34:30 PM
Toluene	ND	0.049		mg/Kg	1	8/18/2022 8:34:30 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/18/2022 8:34:30 PM
Xylenes, Total	ND	0.098		mg/Kg	1	8/18/2022 8:34:30 PM
Surr: 1,2-Dichloroethane-d4	108	70-130		%Rec	1	8/18/2022 8:34:30 PM
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	8/18/2022 8:34:30 PM
Surr: Dibromofluoromethane	121	70-130		%Rec	1	8/18/2022 8:34:30 PM
Surr: Toluene-d8	100	70-130		%Rec	1	8/18/2022 8:34:30 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/18/2022 8:34:30 PM
Surr: BFB	120	70-130		%Rec	1	8/18/2022 8:34:30 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2208A05

Date Reported: 8/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-22 4'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/15/2022 10:10:00 AM

Lab ID: 2208A05-015

Matrix: SOIL

Received Date: 8/17/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/18/2022 9:08:12 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/18/2022 9:08:12 PM
Surr: DNOP	97.6	21-129		%Rec	1	8/18/2022 9:08:12 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	110	60		mg/Kg	20	8/18/2022 7:21:48 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.024		mg/Kg	1	8/18/2022 9:03:05 PM
Toluene	ND	0.048		mg/Kg	1	8/18/2022 9:03:05 PM
Ethylbenzene	ND	0.048		mg/Kg	1	8/18/2022 9:03:05 PM
Xylenes, Total	ND	0.096		mg/Kg	1	8/18/2022 9:03:05 PM
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	1	8/18/2022 9:03:05 PM
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	8/18/2022 9:03:05 PM
Surr: Dibromofluoromethane	116	70-130		%Rec	1	8/18/2022 9:03:05 PM
Surr: Toluene-d8	99.3	70-130		%Rec	1	8/18/2022 9:03:05 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/18/2022 9:03:05 PM
Surr: BFB	118	70-130		%Rec	1	8/18/2022 9:03:05 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2208A05

Date Reported: 8/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-33 2'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/15/2022 11:30:00 AM

Lab ID: 2208A05-016

Matrix: SOIL

Received Date: 8/17/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	8/18/2022 9:23:14 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/18/2022 9:23:14 PM
Surr: DNOP	99.5	21-129		%Rec	1	8/18/2022 9:23:14 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	8/18/2022 7:34:10 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.024		mg/Kg	1	8/18/2022 9:31:40 PM
Toluene	ND	0.047		mg/Kg	1	8/18/2022 9:31:40 PM
Ethylbenzene	ND	0.047		mg/Kg	1	8/18/2022 9:31:40 PM
Xylenes, Total	ND	0.095		mg/Kg	1	8/18/2022 9:31:40 PM
Surr: 1,2-Dichloroethane-d4	108	70-130		%Rec	1	8/18/2022 9:31:40 PM
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	8/18/2022 9:31:40 PM
Surr: Dibromofluoromethane	118	70-130		%Rec	1	8/18/2022 9:31:40 PM
Surr: Toluene-d8	102	70-130		%Rec	1	8/18/2022 9:31:40 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/18/2022 9:31:40 PM
Surr: BFB	124	70-130		%Rec	1	8/18/2022 9:31:40 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2208A05

Date Reported: 8/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-33 4'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/15/2022 11:35:00 AM

Lab ID: 2208A05-017

Matrix: SOIL

Received Date: 8/17/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/18/2022 9:38:21 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/18/2022 9:38:21 PM
Surr: DNOP	104	21-129		%Rec	1	8/18/2022 9:38:21 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	8/18/2022 7:46:30 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.024		mg/Kg	1	8/18/2022 10:00:17 PM
Toluene	ND	0.048		mg/Kg	1	8/18/2022 10:00:17 PM
Ethylbenzene	ND	0.048		mg/Kg	1	8/18/2022 10:00:17 PM
Xylenes, Total	ND	0.095		mg/Kg	1	8/18/2022 10:00:17 PM
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	8/18/2022 10:00:17 PM
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	8/18/2022 10:00:17 PM
Surr: Dibromofluoromethane	115	70-130		%Rec	1	8/18/2022 10:00:17 PM
Surr: Toluene-d8	102	70-130		%Rec	1	8/18/2022 10:00:17 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/18/2022 10:00:17 PM
Surr: BFB	118	70-130		%Rec	1	8/18/2022 10:00:17 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2208A05

Date Reported: 8/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-34 2'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/15/2022 11:40:00 AM

Lab ID: 2208A05-018

Matrix: SOIL

Received Date: 8/17/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	8/18/2022 9:53:44 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/18/2022 9:53:44 PM
Surr: DNOP	95.0	21-129		%Rec	1	8/18/2022 9:53:44 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	8/18/2022 8:23:32 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.025		mg/Kg	1	8/19/2022 12:51:33 AM
Toluene	ND	0.049		mg/Kg	1	8/19/2022 12:51:33 AM
Ethylbenzene	ND	0.049		mg/Kg	1	8/19/2022 12:51:33 AM
Xylenes, Total	ND	0.098		mg/Kg	1	8/19/2022 12:51:33 AM
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	8/19/2022 12:51:33 AM
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	8/19/2022 12:51:33 AM
Surr: Dibromofluoromethane	112	70-130		%Rec	1	8/19/2022 12:51:33 AM
Surr: Toluene-d8	98.8	70-130		%Rec	1	8/19/2022 12:51:33 AM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/19/2022 12:51:33 AM
Surr: BFB	119	70-130		%Rec	1	8/19/2022 12:51:33 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2208A05

Date Reported: 8/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-34 4'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/15/2022 11:45:00 AM

Lab ID: 2208A05-019

Matrix: SOIL

Received Date: 8/17/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/18/2022 10:09:38 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/18/2022 10:09:38 PM
Surr: DNOP	94.4	21-129		%Rec	1	8/18/2022 10:09:38 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	72	59		mg/Kg	20	8/18/2022 8:35:53 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.024		mg/Kg	1	8/19/2022 1:20:01 AM
Toluene	ND	0.048		mg/Kg	1	8/19/2022 1:20:01 AM
Ethylbenzene	ND	0.048		mg/Kg	1	8/19/2022 1:20:01 AM
Xylenes, Total	ND	0.097		mg/Kg	1	8/19/2022 1:20:01 AM
Surr: 1,2-Dichloroethane-d4	107	70-130		%Rec	1	8/19/2022 1:20:01 AM
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	8/19/2022 1:20:01 AM
Surr: Dibromofluoromethane	111	70-130		%Rec	1	8/19/2022 1:20:01 AM
Surr: Toluene-d8	99.2	70-130		%Rec	1	8/19/2022 1:20:01 AM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/19/2022 1:20:01 AM
Surr: BFB	117	70-130		%Rec	1	8/19/2022 1:20:01 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2208A05

Date Reported: 8/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-14 8'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/15/2022 1:30:00 PM

Lab ID: 2208A05-020

Matrix: SOIL

Received Date: 8/17/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	8/18/2022 10:25:10 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/18/2022 10:25:10 PM
Surr: DNOP	88.6	21-129		%Rec	1	8/18/2022 10:25:10 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	80	60		mg/Kg	20	8/18/2022 8:48:14 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.024		mg/Kg	1	8/19/2022 1:48:32 AM
Toluene	ND	0.048		mg/Kg	1	8/19/2022 1:48:32 AM
Ethylbenzene	ND	0.048		mg/Kg	1	8/19/2022 1:48:32 AM
Xylenes, Total	ND	0.096		mg/Kg	1	8/19/2022 1:48:32 AM
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	8/19/2022 1:48:32 AM
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	8/19/2022 1:48:32 AM
Surr: Dibromofluoromethane	112	70-130		%Rec	1	8/19/2022 1:48:32 AM
Surr: Toluene-d8	99.2	70-130		%Rec	1	8/19/2022 1:48:32 AM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/19/2022 1:48:32 AM
Surr: BFB	116	70-130		%Rec	1	8/19/2022 1:48:32 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2208A05

23-Aug-22

Client: Vertex Resources Services, Inc.**Project:** Onyx 29 CTB1 Separator

Sample ID: MB-69603	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 69603	RunNo: 90384								
Prep Date: 8/18/2022	Analysis Date: 8/18/2022	SeqNo: 3226290 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-69603	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 69603	RunNo: 90384								
Prep Date: 8/18/2022	Analysis Date: 8/18/2022	SeqNo: 3226292 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.4	90	110			

Sample ID: MB-69613	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 69613	RunNo: 90383								
Prep Date: 8/18/2022	Analysis Date: 8/18/2022	SeqNo: 3226631 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-69613	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 69613	RunNo: 90383								
Prep Date: 8/18/2022	Analysis Date: 8/18/2022	SeqNo: 3226632 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.5	90	110			

Sample ID: MB-69605	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 69605	RunNo: 90460								
Prep Date: 8/18/2022	Analysis Date: 8/20/2022	SeqNo: 3228049 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-69605	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 69605	RunNo: 90460								
Prep Date: 8/18/2022	Analysis Date: 8/20/2022	SeqNo: 3228050 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.0	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2208A05

23-Aug-22

Client: Vertex Resources Services, Inc.**Project:** Onyx 29 CTB1 Separator

Sample ID: MB-69585	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 69585	RunNo: 90393								
Prep Date: 8/17/2022	Analysis Date: 8/18/2022	SeqNo: 3225979 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.6		10.00		96.0	21	129			

Sample ID: LCS-69585	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 69585	RunNo: 90393								
Prep Date: 8/17/2022	Analysis Date: 8/18/2022	SeqNo: 3225980 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	55	15	50.00	0	111	64.4	127			
Surr: DNOP	5.4		5.000		108	21	129			

Sample ID: 2208A05-001AMS	SampType: MS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: WES22-26 2'	Batch ID: 69585	RunNo: 90393								
Prep Date: 8/17/2022	Analysis Date: 8/18/2022	SeqNo: 3225982 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	41	15	50.00	0	82.7	36.1	154			
Surr: DNOP	3.0		5.000		61.0	21	129			

Sample ID: 2208A05-001AMSD	SampType: MSD	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: WES22-26 2'	Batch ID: 69585	RunNo: 90393								
Prep Date: 8/17/2022	Analysis Date: 8/18/2022	SeqNo: 3225983 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	39	14	46.55	0	83.4	36.1	154	6.30	33.9	
Surr: DNOP	3.0		4.655		64.5	21	129	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2208A05

23-Aug-22

Client: Vertex Resources Services, Inc.**Project:** Onyx 29 CTB1 Separator

Sample ID: 2208a05-002ams	SampType: MS4	TestCode: EPA Method 8260B: Volatiles Short List								
Client ID: WES22-27 2'	Batch ID: 69569	RunNo: 90413								
Prep Date: 8/17/2022	Analysis Date: 8/18/2022	SeqNo: 3225801	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.94	0.024	0.9625	0	98.1	75.8	123			
Toluene	0.94	0.048	0.9625	0	97.4	68.3	130			
Ethylbenzene	0.90	0.048	0.9625	0	93.1	76.6	132			
Xylenes, Total	2.9	0.096	2.887	0	101	74.7	132			
Surr: 1,2-Dichloroethane-d4	0.49		0.4812		102	70	130			
Surr: 4-Bromofluorobenzene	0.51		0.4812		106	70	130			
Surr: Dibromofluoromethane	0.59		0.4812		122	70	130			
Surr: Toluene-d8	0.49		0.4812		101	70	130			

Sample ID: 2208a05-002amsd	SampType: MSD4	TestCode: EPA Method 8260B: Volatiles Short List								
Client ID: WES22-27 2'	Batch ID: 69569	RunNo: 90413								
Prep Date: 8/17/2022	Analysis Date: 8/18/2022	SeqNo: 3225802	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.84	0.024	0.9699	0	86.1	75.8	123	12.3	20	
Toluene	0.80	0.048	0.9699	0	82.5	68.3	130	15.8	20	
Ethylbenzene	0.80	0.048	0.9699	0	83.0	76.6	132	10.8	20	
Xylenes, Total	2.5	0.097	2.910	0	87.3	74.7	132	13.3	20	
Surr: 1,2-Dichloroethane-d4	0.51		0.4850		105	70	130	0	0	
Surr: 4-Bromofluorobenzene	0.52		0.4850		107	70	130	0	0	
Surr: Dibromofluoromethane	0.59		0.4850		121	70	130	0	0	
Surr: Toluene-d8	0.46		0.4850		95.3	70	130	0	0	

Sample ID: lcs-69569	SampType: LCS4	TestCode: EPA Method 8260B: Volatiles Short List								
Client ID: BatchQC	Batch ID: 69569	RunNo: 90413								
Prep Date: 8/17/2022	Analysis Date: 8/18/2022	SeqNo: 3225821	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.85	0.025	1.000	0	84.6	80	120			
Toluene	0.82	0.050	1.000	0	82.4	80	120			
Ethylbenzene	0.85	0.050	1.000	0	85.5	80	120			
Xylenes, Total	2.6	0.10	3.000	0	87.5	80	120			
Surr: 1,2-Dichloroethane-d4	0.54		0.5000		109	70	130			
Surr: 4-Bromofluorobenzene	0.53		0.5000		105	70	130			
Surr: Dibromofluoromethane	0.58		0.5000		116	70	130			
Surr: Toluene-d8	0.50		0.5000		100	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Estimated value
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
PQL Practical Quantitative Limit	RL Reporting Limit
S % Recovery outside of range due to dilution or matrix interference	

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2208A05

23-Aug-22

Client: Vertex Resources Services, Inc.**Project:** Onyx 29 CTB1 Separator

Sample ID: mb-69569	SampType: MBLK		TestCode: EPA Method 8260B: Volatiles Short List							
Client ID: PBS	Batch ID: 69569		RunNo: 90413							
Prep Date: 8/17/2022	Analysis Date: 8/18/2022		SeqNo: 3225822		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 1,2-Dichloroethane-d4	0.50		0.5000		100	70	130			
Surr: 4-Bromofluorobenzene	0.53		0.5000		106	70	130			
Surr: Dibromofluoromethane	0.57		0.5000		115	70	130			
Surr: Toluene-d8	0.50		0.5000		99.6	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2208A05

23-Aug-22

Client: Vertex Resources Services, Inc.**Project:** Onyx 29 CTB1 Separator

Sample ID: 2208a05-001ams	SampType: MS	TestCode: EPA Method 8015D Mod: Gasoline Range								
Client ID: WES22-26 2'	Batch ID: 69569	RunNo: 90413								
Prep Date: 8/17/2022	Analysis Date: 8/18/2022	SeqNo: 3225834 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	24.98	0	105	65.9	123			
Surr: BFB	570		499.5		115	70	130			

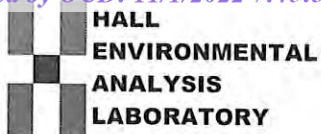
Sample ID: 2208a05-001amsd	SampType: MSD	TestCode: EPA Method 8015D Mod: Gasoline Range								
Client ID: WES22-26 2'	Batch ID: 69569	RunNo: 90413								
Prep Date: 8/17/2022	Analysis Date: 8/18/2022	SeqNo: 3225835 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	24.93	0	97.2	65.9	123	7.77	20	
Surr: BFB	560		498.5		113	70	130	0	0	

Sample ID: lcs-69569	SampType: LCS	TestCode: EPA Method 8015D Mod: Gasoline Range								
Client ID: LCSS	Batch ID: 69569	RunNo: 90413								
Prep Date: 8/17/2022	Analysis Date: 8/18/2022	SeqNo: 3225855 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	87.2	70	130			
Surr: BFB	580		500.0		117	70	130			

Sample ID: mb-69569	SampType: MBLK	TestCode: EPA Method 8015D Mod: Gasoline Range								
Client ID: PBS	Batch ID: 69569	RunNo: 90413								
Prep Date: 8/17/2022	Analysis Date: 8/18/2022	SeqNo: 3225856 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	580		500.0		117	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Vertex Resources
Services, Inc.**

Work Order Number: **2208A05**

RcptNo: 1

Received By: **Juan Rojas**

8/17/2022 7:10:00 AM

Completed By: **Cheyenne Cason**

8/17/2022 8:04:39 AM

Reviewed By:

ms 8/17/22

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☐ No ☐ NA ☒
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH:

(<2 or >12 unless noted)

Adjusted?

Checked by: *KPa 8.17.22*

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:

Date:

By Whom:

Via:

☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.3	Good	Not Present			

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: Devon/KentMailing Address: on file

Phone #:

email or Fax#:

QA/QC Package:

☐ Standard☐ Level 4 (Full Validation)Accreditation: ☐ AZ Compliance☐ NELAC ☐ Other☐ EDD (Type)Turn-Around Time: 2- Day☐ Standard ☒ Rush

Project Name:

only 29 CTB1 (separator)

Project #:

22E-01720-001

Project Manager:

Kent StallingsSampler: CDOn Ice: ☒ Yes ☐ No# of Coolers: 1Cooler Temp (including CF): 030 = 0.3 (°C)

Container Type and #

Preservative Type

HEAL No. 22084085

013

014

015

016

017

018

019

020

402 ICE

ICE

013

014

015

016

017

018

019

020

013

014

015

016

017

018

019

020

013

014

015

016

017

018

019

020

013

014

015

016

017

018

019

020

013

014

015

016

017

018

019

020

013

014

015

016

017

018

019

020

013

014

015

016

017

018

019

020

013

014

015

016

017

018

019

020

013

014

015

016

017

018

019

020

013

014

015

016

017

018

019

020

013

014

015

016

017

018

019

020

013

014

015

016

017

018

019

020

013

014

015

016

017

018

019

020

013

014

015

016

017

018

019

020

013

014

015

016

017

018

019

020

013

014

015

016

017

018

019

020

013

014

015

016

017

018

019

020

013

014

015

016

017

018

019

020

013

014

015

016

017

018

019

020

013

014

015

016

017

018

019

020

013

014

015

016

017

018

019

020

013

014

015

016

017

018

019

020

013

014

015

016

017

018

019

020

013

014

015

016

017

018

019

020

013

014

015

016

017

018

019

020

013

014

015

016

017

018

019

020

013

014

015

016

017

018

019

020

013

014

015

016

017

018

019

020

013

014

015

016

017

018

019

020

013

014

015

016

017

018

019

020

013

014

015

016

017

018

019

020

013

Analysis Request

BTEX / MTBE / TMBs (8021)

TPH:8015D(GRO / DRO / MRO)

8081 Pesticides/8082 PCB's

EDB (Method 504.1)

PAHs by 8310 or 8270SIMS

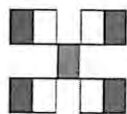
PCRA 8 Metals

Cl, F, Br, NO₃, NO₂, PO₄, SO₄

8260 (VOA)

8270 (Semi-VOA)

Total Coliform (Present/Absent)



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

 Remarks: CC: Chance Dixon
 Direct Bill Devon
 Lot#: 21029815

 Received by: W. Williams Date: 8/16/22 Time: 11:15
 Received by: B. Garcia Date: 8/17/22 Time: 7:10



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

August 23, 2022

Kent Stallings

Vertex Resources Services, Inc.

3101 Boyd Drive

Carlsbad, NM 88220

TEL: (505) 506-0040

FAX:

RE: Onyx 29 CTB1 Separator

OrderNo.: 2208A05

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 20 sample(s) on 8/17/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order 2208A05

Date Reported: 8/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-26 2'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/15/2022 9:00:00 AM

Lab ID: 2208A05-001

Matrix: SOIL

Received Date: 8/17/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/18/2022 5:05:39 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/18/2022 5:05:39 PM
Surr: DNOP	105	21-129		%Rec	1	8/18/2022 5:05:39 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	140	60		mg/Kg	20	8/18/2022 2:36:24 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.025		mg/Kg	1	8/18/2022 12:27:18 PM
Toluene	ND	0.050		mg/Kg	1	8/18/2022 12:27:18 PM
Ethylbenzene	ND	0.050		mg/Kg	1	8/18/2022 12:27:18 PM
Xylenes, Total	ND	0.10		mg/Kg	1	8/18/2022 12:27:18 PM
Surr: 1,2-Dichloroethane-d4	109	70-130		%Rec	1	8/18/2022 12:27:18 PM
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	8/18/2022 12:27:18 PM
Surr: Dibromofluoromethane	118	70-130		%Rec	1	8/18/2022 12:27:18 PM
Surr: Toluene-d8	102	70-130		%Rec	1	8/18/2022 12:27:18 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/18/2022 12:27:18 PM
Surr: BFB	122	70-130		%Rec	1	8/18/2022 12:27:18 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2208A05

Date Reported: 8/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-27 2'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/15/2022 9:05:00 AM

Lab ID: 2208A05-002

Matrix: SOIL

Received Date: 8/17/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	8/18/2022 5:49:07 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/18/2022 5:49:07 PM
Surr: DNOP	59.3	21-129		%Rec	1	8/18/2022 5:49:07 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	68	60		mg/Kg	20	8/18/2022 3:38:28 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.024		mg/Kg	1	8/18/2022 1:53:19 PM
Toluene	ND	0.049		mg/Kg	1	8/18/2022 1:53:19 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/18/2022 1:53:19 PM
Xylenes, Total	ND	0.098		mg/Kg	1	8/18/2022 1:53:19 PM
Surr: 1,2-Dichloroethane-d4	110	70-130		%Rec	1	8/18/2022 1:53:19 PM
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	8/18/2022 1:53:19 PM
Surr: Dibromofluoromethane	120	70-130		%Rec	1	8/18/2022 1:53:19 PM
Surr: Toluene-d8	101	70-130		%Rec	1	8/18/2022 1:53:19 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/18/2022 1:53:19 PM
Surr: BFB	120	70-130		%Rec	1	8/18/2022 1:53:19 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 2 of 25

Analytical Report

Lab Order 2208A05

Date Reported: 8/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-28 2'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/15/2022 9:10:00 AM

Lab ID: 2208A05-003

Matrix: SOIL

Received Date: 8/17/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/18/2022 6:04:09 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/18/2022 6:04:09 PM
Surr: DNOP	95.0	21-129		%Rec	1	8/18/2022 6:04:09 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	8/18/2022 4:15:41 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.025		mg/Kg	1	8/18/2022 3:19:30 PM
Toluene	ND	0.050		mg/Kg	1	8/18/2022 3:19:30 PM
Ethylbenzene	ND	0.050		mg/Kg	1	8/18/2022 3:19:30 PM
Xylenes, Total	ND	0.099		mg/Kg	1	8/18/2022 3:19:30 PM
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	1	8/18/2022 3:19:30 PM
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	8/18/2022 3:19:30 PM
Surr: Dibromofluoromethane	120	70-130		%Rec	1	8/18/2022 3:19:30 PM
Surr: Toluene-d8	99.3	70-130		%Rec	1	8/18/2022 3:19:30 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/18/2022 3:19:30 PM
Surr: BFB	122	70-130		%Rec	1	8/18/2022 3:19:30 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 3 of 25

Analytical Report

Lab Order 2208A05

Date Reported: 8/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-29 2'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/15/2022 9:15:00 AM

Lab ID: 2208A05-004

Matrix: SOIL

Received Date: 8/17/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/18/2022 6:19:19 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/18/2022 6:19:19 PM
Surr: DNOP	92.6	21-129		%Rec	1	8/18/2022 6:19:19 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	8/20/2022 2:57:23 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.024		mg/Kg	1	8/18/2022 3:48:12 PM
Toluene	ND	0.048		mg/Kg	1	8/18/2022 3:48:12 PM
Ethylbenzene	ND	0.048		mg/Kg	1	8/18/2022 3:48:12 PM
Xylenes, Total	ND	0.095		mg/Kg	1	8/18/2022 3:48:12 PM
Surr: 1,2-Dichloroethane-d4	108	70-130		%Rec	1	8/18/2022 3:48:12 PM
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	8/18/2022 3:48:12 PM
Surr: Dibromofluoromethane	122	70-130		%Rec	1	8/18/2022 3:48:12 PM
Surr: Toluene-d8	96.0	70-130		%Rec	1	8/18/2022 3:48:12 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/18/2022 3:48:12 PM
Surr: BFB	115	70-130		%Rec	1	8/18/2022 3:48:12 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 4 of 25

Analytical Report

Lab Order 2208A05

Date Reported: 8/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-30 2'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/15/2022 9:20:00 AM

Lab ID: 2208A05-005

Matrix: SOIL

Received Date: 8/17/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/18/2022 6:34:52 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/18/2022 6:34:52 PM
Surr: DNOP	93.4	21-129		%Rec	1	8/18/2022 6:34:52 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	150	60		mg/Kg	20	8/20/2022 3:59:26 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.024		mg/Kg	1	8/18/2022 4:16:52 PM
Toluene	ND	0.048		mg/Kg	1	8/18/2022 4:16:52 PM
Ethylbenzene	ND	0.048		mg/Kg	1	8/18/2022 4:16:52 PM
Xylenes, Total	ND	0.095		mg/Kg	1	8/18/2022 4:16:52 PM
Surr: 1,2-Dichloroethane-d4	110	70-130		%Rec	1	8/18/2022 4:16:52 PM
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	8/18/2022 4:16:52 PM
Surr: Dibromofluoromethane	123	70-130		%Rec	1	8/18/2022 4:16:52 PM
Surr: Toluene-d8	98.7	70-130		%Rec	1	8/18/2022 4:16:52 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/18/2022 4:16:52 PM
Surr: BFB	119	70-130		%Rec	1	8/18/2022 4:16:52 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2208A05

Date Reported: 8/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-31 2'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/15/2022 9:25:00 AM

Lab ID: 2208A05-006

Matrix: SOIL

Received Date: 8/17/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/18/2022 6:50:16 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/18/2022 6:50:16 PM
Surr: DNOP	85.4	21-129		%Rec	1	8/18/2022 6:50:16 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	71	60		mg/Kg	20	8/20/2022 4:11:51 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.024		mg/Kg	1	8/18/2022 4:45:35 PM
Toluene	ND	0.049		mg/Kg	1	8/18/2022 4:45:35 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/18/2022 4:45:35 PM
Xylenes, Total	ND	0.097		mg/Kg	1	8/18/2022 4:45:35 PM
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	1	8/18/2022 4:45:35 PM
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	8/18/2022 4:45:35 PM
Surr: Dibromofluoromethane	116	70-130		%Rec	1	8/18/2022 4:45:35 PM
Surr: Toluene-d8	98.7	70-130		%Rec	1	8/18/2022 4:45:35 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/18/2022 4:45:35 PM
Surr: BFB	121	70-130		%Rec	1	8/18/2022 4:45:35 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 6 of 25

Analytical Report

Lab Order 2208A05

Date Reported: 8/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-32 2'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/15/2022 9:30:00 AM

Lab ID: 2208A05-007

Matrix: SOIL

Received Date: 8/17/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/18/2022 7:05:35 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/18/2022 7:05:35 PM
Surr: DNOP	103	21-129		%Rec	1	8/18/2022 7:05:35 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	120	60		mg/Kg	20	8/20/2022 4:24:16 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.024		mg/Kg	1	8/18/2022 5:14:14 PM
Toluene	ND	0.049		mg/Kg	1	8/18/2022 5:14:14 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/18/2022 5:14:14 PM
Xylenes, Total	ND	0.097		mg/Kg	1	8/18/2022 5:14:14 PM
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	8/18/2022 5:14:14 PM
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	8/18/2022 5:14:14 PM
Surr: Dibromofluoromethane	120	70-130		%Rec	1	8/18/2022 5:14:14 PM
Surr: Toluene-d8	100	70-130		%Rec	1	8/18/2022 5:14:14 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/18/2022 5:14:14 PM
Surr: BFB	118	70-130		%Rec	1	8/18/2022 5:14:14 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 7 of 25

Analytical Report

Lab Order 2208A05

Date Reported: 8/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-15 4'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/15/2022 9:35:00 AM

Lab ID: 2208A05-008

Matrix: SOIL

Received Date: 8/17/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/18/2022 7:21:14 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/18/2022 7:21:14 PM
Surr: DNOP	119	21-129		%Rec	1	8/18/2022 7:21:14 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	200	60		mg/Kg	20	8/20/2022 4:36:41 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.024		mg/Kg	1	8/18/2022 5:42:49 PM
Toluene	ND	0.047		mg/Kg	1	8/18/2022 5:42:49 PM
Ethylbenzene	ND	0.047		mg/Kg	1	8/18/2022 5:42:49 PM
Xylenes, Total	ND	0.095		mg/Kg	1	8/18/2022 5:42:49 PM
Surr: 1,2-Dichloroethane-d4	110	70-130		%Rec	1	8/18/2022 5:42:49 PM
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	8/18/2022 5:42:49 PM
Surr: Dibromofluoromethane	118	70-130		%Rec	1	8/18/2022 5:42:49 PM
Surr: Toluene-d8	100	70-130		%Rec	1	8/18/2022 5:42:49 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/18/2022 5:42:49 PM
Surr: BFB	119	70-130		%Rec	1	8/18/2022 5:42:49 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 8 of 25

Analytical Report

Lab Order 2208A05

Date Reported: 8/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-16 4'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/15/2022 9:40:00 AM

Lab ID: 2208A05-009

Matrix: SOIL

Received Date: 8/17/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/18/2022 7:36:33 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/18/2022 7:36:33 PM
Surr: DNOP	92.9	21-129		%Rec	1	8/18/2022 7:36:33 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	460	60		mg/Kg	20	8/20/2022 4:49:05 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.024		mg/Kg	1	8/18/2022 6:11:26 PM
Toluene	ND	0.049		mg/Kg	1	8/18/2022 6:11:26 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/18/2022 6:11:26 PM
Xylenes, Total	ND	0.097		mg/Kg	1	8/18/2022 6:11:26 PM
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	1	8/18/2022 6:11:26 PM
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	8/18/2022 6:11:26 PM
Surr: Dibromofluoromethane	118	70-130		%Rec	1	8/18/2022 6:11:26 PM
Surr: Toluene-d8	102	70-130		%Rec	1	8/18/2022 6:11:26 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/18/2022 6:11:26 PM
Surr: BFB	120	70-130		%Rec	1	8/18/2022 6:11:26 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 9 of 25

Analytical Report

Lab Order 2208A05

Date Reported: 8/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-17 4'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/15/2022 9:45:00 AM

Lab ID: 2208A05-010

Matrix: SOIL

Received Date: 8/17/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/18/2022 7:52:10 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/18/2022 7:52:10 PM
Surr: DNOP	108	21-129		%Rec	1	8/18/2022 7:52:10 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	83	60		mg/Kg	20	8/20/2022 5:01:30 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.025		mg/Kg	1	8/18/2022 6:40:02 PM
Toluene	ND	0.050		mg/Kg	1	8/18/2022 6:40:02 PM
Ethylbenzene	ND	0.050		mg/Kg	1	8/18/2022 6:40:02 PM
Xylenes, Total	ND	0.10		mg/Kg	1	8/18/2022 6:40:02 PM
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	8/18/2022 6:40:02 PM
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	8/18/2022 6:40:02 PM
Surr: Dibromofluoromethane	118	70-130		%Rec	1	8/18/2022 6:40:02 PM
Surr: Toluene-d8	98.6	70-130		%Rec	1	8/18/2022 6:40:02 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/18/2022 6:40:02 PM
Surr: BFB	121	70-130		%Rec	1	8/18/2022 6:40:02 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2208A05

Date Reported: 8/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-18 4'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/15/2022 9:50:00 AM

Lab ID: 2208A05-011

Matrix: SOIL

Received Date: 8/17/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	8/18/2022 8:07:19 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/18/2022 8:07:19 PM
Surr: DNOP	76.5	21-129		%Rec	1	8/18/2022 8:07:19 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	64	60		mg/Kg	20	8/18/2022 5:18:21 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.024		mg/Kg	1	8/18/2022 7:08:43 PM
Toluene	ND	0.048		mg/Kg	1	8/18/2022 7:08:43 PM
Ethylbenzene	ND	0.048		mg/Kg	1	8/18/2022 7:08:43 PM
Xylenes, Total	ND	0.097		mg/Kg	1	8/18/2022 7:08:43 PM
Surr: 1,2-Dichloroethane-d4	107	70-130		%Rec	1	8/18/2022 7:08:43 PM
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	8/18/2022 7:08:43 PM
Surr: Dibromofluoromethane	116	70-130		%Rec	1	8/18/2022 7:08:43 PM
Surr: Toluene-d8	101	70-130		%Rec	1	8/18/2022 7:08:43 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/18/2022 7:08:43 PM
Surr: BFB	118	70-130		%Rec	1	8/18/2022 7:08:43 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2208A05

Date Reported: 8/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-19 4'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/15/2022 9:55:00 AM

Lab ID: 2208A05-012

Matrix: SOIL

Received Date: 8/17/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/18/2022 8:22:35 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/18/2022 8:22:35 PM
Surr: DNOP	101	21-129		%Rec	1	8/18/2022 8:22:35 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	260	60		mg/Kg	20	8/18/2022 6:20:04 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.025		mg/Kg	1	8/18/2022 7:37:18 PM
Toluene	ND	0.049		mg/Kg	1	8/18/2022 7:37:18 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/18/2022 7:37:18 PM
Xylenes, Total	ND	0.098		mg/Kg	1	8/18/2022 7:37:18 PM
Surr: 1,2-Dichloroethane-d4	108	70-130		%Rec	1	8/18/2022 7:37:18 PM
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	8/18/2022 7:37:18 PM
Surr: Dibromofluoromethane	122	70-130		%Rec	1	8/18/2022 7:37:18 PM
Surr: Toluene-d8	98.9	70-130		%Rec	1	8/18/2022 7:37:18 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/18/2022 7:37:18 PM
Surr: BFB	118	70-130		%Rec	1	8/18/2022 7:37:18 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2208A05

Date Reported: 8/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-20 4'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/15/2022 10:00:00 AM

Lab ID: 2208A05-013

Matrix: SOIL

Received Date: 8/17/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	8/18/2022 8:37:46 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/18/2022 8:37:46 PM
Surr: DNOP	86.5	21-129		%Rec	1	8/18/2022 8:37:46 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	130	60		mg/Kg	20	8/18/2022 6:57:06 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.025		mg/Kg	1	8/18/2022 8:05:54 PM
Toluene	ND	0.050		mg/Kg	1	8/18/2022 8:05:54 PM
Ethylbenzene	ND	0.050		mg/Kg	1	8/18/2022 8:05:54 PM
Xylenes, Total	ND	0.099		mg/Kg	1	8/18/2022 8:05:54 PM
Surr: 1,2-Dichloroethane-d4	110	70-130		%Rec	1	8/18/2022 8:05:54 PM
Surr: 4-Bromofluorobenzene	108	70-130		%Rec	1	8/18/2022 8:05:54 PM
Surr: Dibromofluoromethane	116	70-130		%Rec	1	8/18/2022 8:05:54 PM
Surr: Toluene-d8	98.4	70-130		%Rec	1	8/18/2022 8:05:54 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/18/2022 8:05:54 PM
Surr: BFB	120	70-130		%Rec	1	8/18/2022 8:05:54 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2208A05

Date Reported: 8/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-21 4'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/15/2022 10:05:00 AM

Lab ID: 2208A05-014

Matrix: SOIL

Received Date: 8/17/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	13		mg/Kg	1	8/18/2022 8:52:56 PM
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	8/18/2022 8:52:56 PM
Surr: DNOP	84.3	21-129		%Rec	1	8/18/2022 8:52:56 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	85	60		mg/Kg	20	8/18/2022 7:09:27 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.024		mg/Kg	1	8/18/2022 8:34:30 PM
Toluene	ND	0.049		mg/Kg	1	8/18/2022 8:34:30 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/18/2022 8:34:30 PM
Xylenes, Total	ND	0.098		mg/Kg	1	8/18/2022 8:34:30 PM
Surr: 1,2-Dichloroethane-d4	108	70-130		%Rec	1	8/18/2022 8:34:30 PM
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	8/18/2022 8:34:30 PM
Surr: Dibromofluoromethane	121	70-130		%Rec	1	8/18/2022 8:34:30 PM
Surr: Toluene-d8	100	70-130		%Rec	1	8/18/2022 8:34:30 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/18/2022 8:34:30 PM
Surr: BFB	120	70-130		%Rec	1	8/18/2022 8:34:30 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 14 of 25

Analytical Report

Lab Order 2208A05

Date Reported: 8/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-22 4'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/15/2022 10:10:00 AM

Lab ID: 2208A05-015

Matrix: SOIL

Received Date: 8/17/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/18/2022 9:08:12 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/18/2022 9:08:12 PM
Surr: DNOP	97.6	21-129		%Rec	1	8/18/2022 9:08:12 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	110	60		mg/Kg	20	8/18/2022 7:21:48 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.024		mg/Kg	1	8/18/2022 9:03:05 PM
Toluene	ND	0.048		mg/Kg	1	8/18/2022 9:03:05 PM
Ethylbenzene	ND	0.048		mg/Kg	1	8/18/2022 9:03:05 PM
Xylenes, Total	ND	0.096		mg/Kg	1	8/18/2022 9:03:05 PM
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	1	8/18/2022 9:03:05 PM
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	8/18/2022 9:03:05 PM
Surr: Dibromofluoromethane	116	70-130		%Rec	1	8/18/2022 9:03:05 PM
Surr: Toluene-d8	99.3	70-130		%Rec	1	8/18/2022 9:03:05 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/18/2022 9:03:05 PM
Surr: BFB	118	70-130		%Rec	1	8/18/2022 9:03:05 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2208A05

Date Reported: 8/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-33 2'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/15/2022 11:30:00 AM

Lab ID: 2208A05-016

Matrix: SOIL

Received Date: 8/17/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	8/18/2022 9:23:14 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/18/2022 9:23:14 PM
Surr: DNOP	99.5	21-129		%Rec	1	8/18/2022 9:23:14 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	8/18/2022 7:34:10 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.024		mg/Kg	1	8/18/2022 9:31:40 PM
Toluene	ND	0.047		mg/Kg	1	8/18/2022 9:31:40 PM
Ethylbenzene	ND	0.047		mg/Kg	1	8/18/2022 9:31:40 PM
Xylenes, Total	ND	0.095		mg/Kg	1	8/18/2022 9:31:40 PM
Surr: 1,2-Dichloroethane-d4	108	70-130		%Rec	1	8/18/2022 9:31:40 PM
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	8/18/2022 9:31:40 PM
Surr: Dibromofluoromethane	118	70-130		%Rec	1	8/18/2022 9:31:40 PM
Surr: Toluene-d8	102	70-130		%Rec	1	8/18/2022 9:31:40 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/18/2022 9:31:40 PM
Surr: BFB	124	70-130		%Rec	1	8/18/2022 9:31:40 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 16 of 25

Analytical Report

Lab Order 2208A05

Date Reported: 8/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-33 4'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/15/2022 11:35:00 AM

Lab ID: 2208A05-017

Matrix: SOIL

Received Date: 8/17/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/18/2022 9:38:21 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/18/2022 9:38:21 PM
Surr: DNOP	104	21-129		%Rec	1	8/18/2022 9:38:21 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	8/18/2022 7:46:30 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.024		mg/Kg	1	8/18/2022 10:00:17 PM
Toluene	ND	0.048		mg/Kg	1	8/18/2022 10:00:17 PM
Ethylbenzene	ND	0.048		mg/Kg	1	8/18/2022 10:00:17 PM
Xylenes, Total	ND	0.095		mg/Kg	1	8/18/2022 10:00:17 PM
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	8/18/2022 10:00:17 PM
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	8/18/2022 10:00:17 PM
Surr: Dibromofluoromethane	115	70-130		%Rec	1	8/18/2022 10:00:17 PM
Surr: Toluene-d8	102	70-130		%Rec	1	8/18/2022 10:00:17 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/18/2022 10:00:17 PM
Surr: BFB	118	70-130		%Rec	1	8/18/2022 10:00:17 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2208A05

Date Reported: 8/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-34 2'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/15/2022 11:40:00 AM

Lab ID: 2208A05-018

Matrix: SOIL

Received Date: 8/17/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	8/18/2022 9:53:44 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/18/2022 9:53:44 PM
Surr: DNOP	95.0	21-129		%Rec	1	8/18/2022 9:53:44 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	8/18/2022 8:23:32 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.025		mg/Kg	1	8/19/2022 12:51:33 AM
Toluene	ND	0.049		mg/Kg	1	8/19/2022 12:51:33 AM
Ethylbenzene	ND	0.049		mg/Kg	1	8/19/2022 12:51:33 AM
Xylenes, Total	ND	0.098		mg/Kg	1	8/19/2022 12:51:33 AM
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	8/19/2022 12:51:33 AM
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	8/19/2022 12:51:33 AM
Surr: Dibromofluoromethane	112	70-130		%Rec	1	8/19/2022 12:51:33 AM
Surr: Toluene-d8	98.8	70-130		%Rec	1	8/19/2022 12:51:33 AM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/19/2022 12:51:33 AM
Surr: BFB	119	70-130		%Rec	1	8/19/2022 12:51:33 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2208A05

Date Reported: 8/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-34 4'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/15/2022 11:45:00 AM

Lab ID: 2208A05-019

Matrix: SOIL

Received Date: 8/17/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/18/2022 10:09:38 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/18/2022 10:09:38 PM
Surr: DNOP	94.4	21-129		%Rec	1	8/18/2022 10:09:38 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	72	59		mg/Kg	20	8/18/2022 8:35:53 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.024		mg/Kg	1	8/19/2022 1:20:01 AM
Toluene	ND	0.048		mg/Kg	1	8/19/2022 1:20:01 AM
Ethylbenzene	ND	0.048		mg/Kg	1	8/19/2022 1:20:01 AM
Xylenes, Total	ND	0.097		mg/Kg	1	8/19/2022 1:20:01 AM
Surr: 1,2-Dichloroethane-d4	107	70-130		%Rec	1	8/19/2022 1:20:01 AM
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	8/19/2022 1:20:01 AM
Surr: Dibromofluoromethane	111	70-130		%Rec	1	8/19/2022 1:20:01 AM
Surr: Toluene-d8	99.2	70-130		%Rec	1	8/19/2022 1:20:01 AM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/19/2022 1:20:01 AM
Surr: BFB	117	70-130		%Rec	1	8/19/2022 1:20:01 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2208A05

Date Reported: 8/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-14 8'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/15/2022 1:30:00 PM

Lab ID: 2208A05-020

Matrix: SOIL

Received Date: 8/17/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	8/18/2022 10:25:10 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/18/2022 10:25:10 PM
Surr: DNOP	88.6	21-129		%Rec	1	8/18/2022 10:25:10 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	80	60		mg/Kg	20	8/18/2022 8:48:14 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.024		mg/Kg	1	8/19/2022 1:48:32 AM
Toluene	ND	0.048		mg/Kg	1	8/19/2022 1:48:32 AM
Ethylbenzene	ND	0.048		mg/Kg	1	8/19/2022 1:48:32 AM
Xylenes, Total	ND	0.096		mg/Kg	1	8/19/2022 1:48:32 AM
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	8/19/2022 1:48:32 AM
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	8/19/2022 1:48:32 AM
Surr: Dibromofluoromethane	112	70-130		%Rec	1	8/19/2022 1:48:32 AM
Surr: Toluene-d8	99.2	70-130		%Rec	1	8/19/2022 1:48:32 AM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/19/2022 1:48:32 AM
Surr: BFB	116	70-130		%Rec	1	8/19/2022 1:48:32 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2208A05

23-Aug-22

Client: Vertex Resources Services, Inc.**Project:** Onyx 29 CTB1 Separator

Sample ID: MB-69603	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 69603	RunNo: 90384								
Prep Date: 8/18/2022	Analysis Date: 8/18/2022	SeqNo: 3226290 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-69603	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 69603	RunNo: 90384								
Prep Date: 8/18/2022	Analysis Date: 8/18/2022	SeqNo: 3226292 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.4	90	110			

Sample ID: MB-69613	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 69613	RunNo: 90383								
Prep Date: 8/18/2022	Analysis Date: 8/18/2022	SeqNo: 3226631 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-69613	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 69613	RunNo: 90383								
Prep Date: 8/18/2022	Analysis Date: 8/18/2022	SeqNo: 3226632 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.5	90	110			

Sample ID: MB-69605	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 69605	RunNo: 90460								
Prep Date: 8/18/2022	Analysis Date: 8/20/2022	SeqNo: 3228049 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-69605	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 69605	RunNo: 90460								
Prep Date: 8/18/2022	Analysis Date: 8/20/2022	SeqNo: 3228050 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.0	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2208A05

23-Aug-22

Client: Vertex Resources Services, Inc.**Project:** Onyx 29 CTB1 Separator

Sample ID: MB-69585	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 69585	RunNo: 90393								
Prep Date: 8/17/2022	Analysis Date: 8/18/2022	SeqNo: 3225979 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.6		10.00		96.0	21	129			

Sample ID: LCS-69585	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 69585	RunNo: 90393								
Prep Date: 8/17/2022	Analysis Date: 8/18/2022	SeqNo: 3225980 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	55	15	50.00	0	111	64.4	127			
Surr: DNOP	5.4		5.000		108	21	129			

Sample ID: 2208A05-001AMS	SampType: MS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: WES22-26 2'	Batch ID: 69585	RunNo: 90393								
Prep Date: 8/17/2022	Analysis Date: 8/18/2022	SeqNo: 3225982 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	41	15	50.00	0	82.7	36.1	154			
Surr: DNOP	3.0		5.000		61.0	21	129			

Sample ID: 2208A05-001AMSD	SampType: MSD	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: WES22-26 2'	Batch ID: 69585	RunNo: 90393								
Prep Date: 8/17/2022	Analysis Date: 8/18/2022	SeqNo: 3225983 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	39	14	46.55	0	83.4	36.1	154	6.30	33.9	
Surr: DNOP	3.0		4.655		64.5	21	129	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2208A05

23-Aug-22

Client: Vertex Resources Services, Inc.**Project:** Onyx 29 CTB1 Separator

Sample ID: 2208a05-002ams	SampType: MS4	TestCode: EPA Method 8260B: Volatiles Short List								
Client ID: WES22-27 2'	Batch ID: 69569	RunNo: 90413								
Prep Date: 8/17/2022	Analysis Date: 8/18/2022	SeqNo: 3225801	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.94	0.024	0.9625	0	98.1	75.8	123			
Toluene	0.94	0.048	0.9625	0	97.4	68.3	130			
Ethylbenzene	0.90	0.048	0.9625	0	93.1	76.6	132			
Xylenes, Total	2.9	0.096	2.887	0	101	74.7	132			
Surr: 1,2-Dichloroethane-d4	0.49		0.4812		102	70	130			
Surr: 4-Bromofluorobenzene	0.51		0.4812		106	70	130			
Surr: Dibromofluoromethane	0.59		0.4812		122	70	130			
Surr: Toluene-d8	0.49		0.4812		101	70	130			

Sample ID: 2208a05-002amsd	SampType: MSD4	TestCode: EPA Method 8260B: Volatiles Short List								
Client ID: WES22-27 2'	Batch ID: 69569	RunNo: 90413								
Prep Date: 8/17/2022	Analysis Date: 8/18/2022	SeqNo: 3225802	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.84	0.024	0.9699	0	86.1	75.8	123	12.3	20	
Toluene	0.80	0.048	0.9699	0	82.5	68.3	130	15.8	20	
Ethylbenzene	0.80	0.048	0.9699	0	83.0	76.6	132	10.8	20	
Xylenes, Total	2.5	0.097	2.910	0	87.3	74.7	132	13.3	20	
Surr: 1,2-Dichloroethane-d4	0.51		0.4850		105	70	130	0	0	
Surr: 4-Bromofluorobenzene	0.52		0.4850		107	70	130	0	0	
Surr: Dibromofluoromethane	0.59		0.4850		121	70	130	0	0	
Surr: Toluene-d8	0.46		0.4850		95.3	70	130	0	0	

Sample ID: lcs-69569	SampType: LCS4	TestCode: EPA Method 8260B: Volatiles Short List								
Client ID: BatchQC	Batch ID: 69569	RunNo: 90413								
Prep Date: 8/17/2022	Analysis Date: 8/18/2022	SeqNo: 3225821	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.85	0.025	1.000	0	84.6	80	120			
Toluene	0.82	0.050	1.000	0	82.4	80	120			
Ethylbenzene	0.85	0.050	1.000	0	85.5	80	120			
Xylenes, Total	2.6	0.10	3.000	0	87.5	80	120			
Surr: 1,2-Dichloroethane-d4	0.54		0.5000		109	70	130			
Surr: 4-Bromofluorobenzene	0.53		0.5000		105	70	130			
Surr: Dibromofluoromethane	0.58		0.5000		116	70	130			
Surr: Toluene-d8	0.50		0.5000		100	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2208A05

23-Aug-22

Client: Vertex Resources Services, Inc.**Project:** Onyx 29 CTB1 Separator

Sample ID: mb-69569	SampType: MBLK	TestCode: EPA Method 8260B: Volatiles Short List								
Client ID: PBS	Batch ID: 69569	RunNo: 90413								
Prep Date: 8/17/2022	Analysis Date: 8/18/2022	SeqNo: 3225822 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 1,2-Dichloroethane-d4	0.50		0.5000		100	70	130			
Surr: 4-Bromofluorobenzene	0.53		0.5000		106	70	130			
Surr: Dibromofluoromethane	0.57		0.5000		115	70	130			
Surr: Toluene-d8	0.50		0.5000		99.6	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Page 24 of 25

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2208A05

23-Aug-22

Client: Vertex Resources Services, Inc.**Project:** Onyx 29 CTB1 Separator

Sample ID: 2208a05-001ams	SampType: MS	TestCode: EPA Method 8015D Mod: Gasoline Range								
Client ID: WES22-26 2'	Batch ID: 69569	RunNo: 90413								
Prep Date: 8/17/2022	Analysis Date: 8/18/2022	SeqNo: 3225834 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	24.98	0	105	65.9	123			
Surr: BFB	570		499.5		115	70	130			

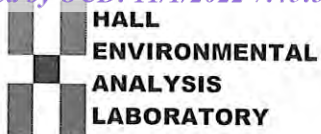
Sample ID: 2208a05-001amsd	SampType: MSD	TestCode: EPA Method 8015D Mod: Gasoline Range								
Client ID: WES22-26 2'	Batch ID: 69569	RunNo: 90413								
Prep Date: 8/17/2022	Analysis Date: 8/18/2022	SeqNo: 3225835 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	24.93	0	97.2	65.9	123	7.77	20	
Surr: BFB	560		498.5		113	70	130	0	0	

Sample ID: lcs-69569	SampType: LCS	TestCode: EPA Method 8015D Mod: Gasoline Range								
Client ID: LCSS	Batch ID: 69569	RunNo: 90413								
Prep Date: 8/17/2022	Analysis Date: 8/18/2022	SeqNo: 3225855 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	87.2	70	130			
Surr: BFB	580		500.0		117	70	130			

Sample ID: mb-69569	SampType: MBLK	TestCode: EPA Method 8015D Mod: Gasoline Range								
Client ID: PBS	Batch ID: 69569	RunNo: 90413								
Prep Date: 8/17/2022	Analysis Date: 8/18/2022	SeqNo: 3225856 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	580		500.0		117	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Vertex Resources
Services, Inc.**

Work Order Number: **2208A05**

RcptNo: 1

Received By: **Juan Rojas**

8/17/2022 7:10:00 AM

Completed By: **Cheyenne Cason**

8/17/2022 8:04:39 AM

Reviewed By:

ms 8/17/22

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. Received at least 1 vial with headspace $<1/4$ " for AQ VOA? Yes ☐ No ☐ NA ☒
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH:

(<2 or >12 unless noted)

Adjusted?

Checked by: *KPa 8.17.22*

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:

Date:

By Whom:

Via:

☐ eMail

☐ Phone

☐ Fax

☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.3	Good	Not Present			



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

August 23, 2022

Kent Stallings

Vertex Resources Services, Inc.

3101 Boyd Drive

Carlsbad, NM 88220

TEL: (505) 506-0040

FAX:

RE: Onyx 29 CTB1 Separator

OrderNo.: 2208A84

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 5 sample(s) on 8/18/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order 2208A84

Date Reported: 8/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-35 1'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/16/2022 9:30:00 AM

Lab ID: 2208A84-001

Matrix: SOIL

Received Date: 8/18/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	13		mg/Kg	1	8/18/2022 11:56:59 AM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	8/18/2022 11:56:59 AM
Surr: DNOP	88.2	21-129		%Rec	1	8/18/2022 11:56:59 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	3.1		mg/Kg	1	8/18/2022 1:11:00 PM
Surr: BFB	104	37.7-212		%Rec	1	8/18/2022 1:11:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.016		mg/Kg	1	8/18/2022 1:11:00 PM
Toluene	ND	0.031		mg/Kg	1	8/18/2022 1:11:00 PM
Ethylbenzene	ND	0.031		mg/Kg	1	8/18/2022 1:11:00 PM
Xylenes, Total	ND	0.063		mg/Kg	1	8/18/2022 1:11:00 PM
Surr: 4-Bromofluorobenzene	97.9	70-130		%Rec	1	8/18/2022 1:11:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	8/20/2022 1:55:18 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 1 of 8

Analytical Report

Lab Order 2208A84

Date Reported: 8/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-36 1'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/16/2022 9:35:00 AM

Lab ID: 2208A84-002

Matrix: SOIL

Received Date: 8/18/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	8/18/2022 12:10:51 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/18/2022 12:10:51 PM
Surr: DNOP	92.6	21-129		%Rec	1	8/18/2022 12:10:51 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	3.5		mg/Kg	1	8/18/2022 1:51:00 PM
Surr: BFB	104	37.7-212		%Rec	1	8/18/2022 1:51:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.017		mg/Kg	1	8/18/2022 1:51:00 PM
Toluene	ND	0.035		mg/Kg	1	8/18/2022 1:51:00 PM
Ethylbenzene	ND	0.035		mg/Kg	1	8/18/2022 1:51:00 PM
Xylenes, Total	ND	0.069		mg/Kg	1	8/18/2022 1:51:00 PM
Surr: 4-Bromofluorobenzene	99.2	70-130		%Rec	1	8/18/2022 1:51:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	8/20/2022 2:07:43 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2208A84

Date Reported: 8/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-37 1'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/16/2022 9:40:00 AM

Lab ID: 2208A84-003

Matrix: SOIL

Received Date: 8/18/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	19	15		mg/Kg	1	8/18/2022 12:24:49 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/18/2022 12:24:49 PM
Surr: DNOP	96.8	21-129		%Rec	1	8/18/2022 12:24:49 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	3.1		mg/Kg	1	8/18/2022 2:11:00 PM
Surr: BFB	102	37.7-212		%Rec	1	8/18/2022 2:11:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.016		mg/Kg	1	8/18/2022 2:11:00 PM
Toluene	ND	0.031		mg/Kg	1	8/18/2022 2:11:00 PM
Ethylbenzene	ND	0.031		mg/Kg	1	8/18/2022 2:11:00 PM
Xylenes, Total	ND	0.063		mg/Kg	1	8/18/2022 2:11:00 PM
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	8/18/2022 2:11:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	8/20/2022 2:20:09 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 3 of 8

Analytical Report

Lab Order 2208A84

Date Reported: 8/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-38 2'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/16/2022 11:30:00 AM

Lab ID: 2208A84-004

Matrix: SOIL

Received Date: 8/18/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	8/18/2022 12:38:44 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/18/2022 12:38:44 PM
Surr: DNOP	89.3	21-129		%Rec	1	8/18/2022 12:38:44 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	8/18/2022 2:30:00 PM
Surr: BFB	104	37.7-212		%Rec	1	8/18/2022 2:30:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.020		mg/Kg	1	8/18/2022 2:30:00 PM
Toluene	ND	0.039		mg/Kg	1	8/18/2022 2:30:00 PM
Ethylbenzene	ND	0.039		mg/Kg	1	8/18/2022 2:30:00 PM
Xylenes, Total	ND	0.079		mg/Kg	1	8/18/2022 2:30:00 PM
Surr: 4-Bromofluorobenzene	99.8	70-130		%Rec	1	8/18/2022 2:30:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	190	60		mg/Kg	20	8/20/2022 2:32:34 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2208A84

Date Reported: 8/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-40 2'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/16/2022 1:00:00 PM

Lab ID: 2208A84-005

Matrix: SOIL

Received Date: 8/18/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	8/18/2022 12:52:49 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/18/2022 12:52:49 PM
Surr: DNOP	102	21-129		%Rec	1	8/18/2022 12:52:49 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	8/18/2022 2:50:00 PM
Surr: BFB	105	37.7-212		%Rec	1	8/18/2022 2:50:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.020		mg/Kg	1	8/18/2022 2:50:00 PM
Toluene	ND	0.041		mg/Kg	1	8/18/2022 2:50:00 PM
Ethylbenzene	ND	0.041		mg/Kg	1	8/18/2022 2:50:00 PM
Xylenes, Total	ND	0.081		mg/Kg	1	8/18/2022 2:50:00 PM
Surr: 4-Bromofluorobenzene	98.9	70-130		%Rec	1	8/18/2022 2:50:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	220	60		mg/Kg	20	8/20/2022 2:44:58 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2208A84
23-Aug-22

Client: Vertex Resources Services, Inc.
Project: Onyx 29 CTB1 Separator

Sample ID: MB-69605	SampType: mblk	TestCode: EPA Method 300.0: Anions
Client ID: PBS	Batch ID: 69605	RunNo: 90460
Prep Date: 8/18/2022	Analysis Date: 8/20/2022	SeqNo: 3228049 Units: mg/Kg
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Chloride	ND	1.5

Sample ID: LCS-69605	SampType: lcs	TestCode: EPA Method 300.0: Anions
Client ID: LCSS	Batch ID: 69605	RunNo: 90460
Prep Date: 8/18/2022	Analysis Date: 8/20/2022	SeqNo: 3228050 Units: mg/Kg
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Chloride	14	1.5 15.00 0 95.0 90 110

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

Page 6 of 8

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2208A84

23-Aug-22

Client: Vertex Resources Services, Inc.**Project:** Onyx 29 CTB1 Separator

Sample ID: 2.5ug gro lcs	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: A90390		RunNo: 90390							
Prep Date:	Analysis Date: 8/18/2022		SeqNo: 3225322		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	102	72.3	137			
Surr: BFB	2200		1000		218	37.7	212			S

Sample ID: mb	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: A90390		RunNo: 90390							
Prep Date:	Analysis Date: 8/18/2022		SeqNo: 3225323		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		103	37.7	212			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

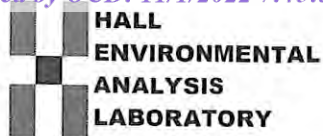
QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**WO#: **2208A84****23-Aug-22****Client:** Vertex Resources Services, Inc.**Project:** Onyx 29 CTB1 Separator

Sample ID: 100ng btex lcs	SampType: LCS			TestCode: EPA Method 8021B: Volatiles						
Client ID: LCSS	Batch ID: B90390			RunNo: 90390						
Prep Date:	Analysis Date: 8/18/2022			SeqNo: 3225327		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.83	0.025	1.000	0	83.4	80	120			
Toluene	0.86	0.050	1.000	0	85.6	80	120			
Ethylbenzene	0.87	0.050	1.000	0	87.2	80	120			
Xylenes, Total	2.6	0.10	3.000	0	87.1	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		99.7	70	130			

Sample ID: mb	SampType: MBLK			TestCode: EPA Method 8021B: Volatiles						
Client ID: PBS	Batch ID: B90390			RunNo: 90390						
Prep Date:	Analysis Date: 8/18/2022			SeqNo: 3225328		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		99.6	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Vertex Resources
Services, Inc.

Work Order Number: 2208A84

RcptNo: 1

Received By: Tracy Casarrubias 8/18/2022 7:15:00 AM

Completed By: Tracy Casarrubias 8/18/2022 8:15:24 AM

Reviewed By:

KPA 8.18.22

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. Received at least 1 vial with headspace $<1/4$ " for AQ VOA? Yes ☐ No ☐ NA ☒
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐
- # of preserved bottles checked for pH: 7 (<2 or >12 unless noted)
Adjusted? 7
Checked by: ms/18/22

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.2	Good	Yes			

Chain-of-Custody Record

Client: Devon/VenturMailing Address: ON FILE

Phone #:

email or Fax#:

QA/QC Package:

☐ Standard☐ Level 4 (Full Validation)Accreditation: ☐ Az Compliance☐ NELAC ☐ Other☐ EDD (Type)Turn-Around Time: 4-5 day☐ Standard☒ Rush same day

Project Name:

0797 29678 / (separation)

Project #:

22E-01720 -001

Project Manager:

Kent StearningsSampler: CDOn Ice: ☒ Yes ☐ No# of Coolers: 1Cooler Temp (including CF): 5-3-0.1 = 5.2 (°C)

Container Type and #

4 02

Preservative Type

ICE

HEAL No.

2208A84001002003004005

Date

8/16 9:309:359:4011:301:00

Time

9:309:359:4011:301:00

Sample Name

WES22-35 1'WES22-36 1'WES22-37 1'WES22-38 2'WES22-40 2'

Matrix

SOI

Date

8/16 9:309:359:4011:301:00

Time

9:309:359:4011:301:00

Sample Name

WES22-35 1'WES22-36 1'WES22-37 1'WES22-38 2'WES22-40 2'

Matrix

SOI

Analysis Request

BTEX / MTBE / TMBs (8021)

TPH:8015D(GRO / DRO / MRO)

8081 Pesticides/8082 PCBs

EDB (Method 504.1)

PAHs by 8310 or 8270SIMS

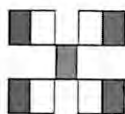
RCRA 8 Metals

Cl, F, Br, NO₃, NO₂, PO₄, SO₄

8260 (VOA)

8270 (Semi-VOA)

Total Coliform (Present/Absent)

HALL ENVIRONMENTAL
ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Remarks:

CC: Chancel Dixon
Direct Bill Devon
NO# 21029815

Received by: Quinn Date: 8/16/22 Time: 7:15Received by: Quinn Date: 8/16/22 Time: 7:15



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

August 23, 2022

Kent Stallings

Vertex Resources Services, Inc.

3101 Boyd Drive

Carlsbad, NM 88220

TEL: (505) 506-0040

FAX:

RE: Onyx 29 CTB1 Separator

OrderNo.: 2208A84

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 5 sample(s) on 8/18/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman".

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order 2208A84

Date Reported: 8/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-35 1'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/16/2022 9:30:00 AM

Lab ID: 2208A84-001

Matrix: SOIL

Received Date: 8/18/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	13		mg/Kg	1	8/18/2022 11:56:59 AM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	8/18/2022 11:56:59 AM
Surr: DNOP	88.2	21-129		%Rec	1	8/18/2022 11:56:59 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	3.1		mg/Kg	1	8/18/2022 1:11:00 PM
Surr: BFB	104	37.7-212		%Rec	1	8/18/2022 1:11:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.016		mg/Kg	1	8/18/2022 1:11:00 PM
Toluene	ND	0.031		mg/Kg	1	8/18/2022 1:11:00 PM
Ethylbenzene	ND	0.031		mg/Kg	1	8/18/2022 1:11:00 PM
Xylenes, Total	ND	0.063		mg/Kg	1	8/18/2022 1:11:00 PM
Surr: 4-Bromofluorobenzene	97.9	70-130		%Rec	1	8/18/2022 1:11:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	8/20/2022 1:55:18 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 1 of 8

Analytical Report

Lab Order 2208A84

Date Reported: 8/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-36 1'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/16/2022 9:35:00 AM

Lab ID: 2208A84-002

Matrix: SOIL

Received Date: 8/18/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	8/18/2022 12:10:51 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/18/2022 12:10:51 PM
Surr: DNOP	92.6	21-129		%Rec	1	8/18/2022 12:10:51 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	3.5		mg/Kg	1	8/18/2022 1:51:00 PM
Surr: BFB	104	37.7-212		%Rec	1	8/18/2022 1:51:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.017		mg/Kg	1	8/18/2022 1:51:00 PM
Toluene	ND	0.035		mg/Kg	1	8/18/2022 1:51:00 PM
Ethylbenzene	ND	0.035		mg/Kg	1	8/18/2022 1:51:00 PM
Xylenes, Total	ND	0.069		mg/Kg	1	8/18/2022 1:51:00 PM
Surr: 4-Bromofluorobenzene	99.2	70-130		%Rec	1	8/18/2022 1:51:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	8/20/2022 2:07:43 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2208A84

Date Reported: 8/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-37 1'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/16/2022 9:40:00 AM

Lab ID: 2208A84-003

Matrix: SOIL

Received Date: 8/18/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	19	15		mg/Kg	1	8/18/2022 12:24:49 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/18/2022 12:24:49 PM
Surr: DNOP	96.8	21-129		%Rec	1	8/18/2022 12:24:49 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	3.1		mg/Kg	1	8/18/2022 2:11:00 PM
Surr: BFB	102	37.7-212		%Rec	1	8/18/2022 2:11:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.016		mg/Kg	1	8/18/2022 2:11:00 PM
Toluene	ND	0.031		mg/Kg	1	8/18/2022 2:11:00 PM
Ethylbenzene	ND	0.031		mg/Kg	1	8/18/2022 2:11:00 PM
Xylenes, Total	ND	0.063		mg/Kg	1	8/18/2022 2:11:00 PM
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	8/18/2022 2:11:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	8/20/2022 2:20:09 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 3 of 8

Analytical Report

Lab Order 2208A84

Date Reported: 8/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-38 2'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/16/2022 11:30:00 AM

Lab ID: 2208A84-004

Matrix: SOIL

Received Date: 8/18/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	8/18/2022 12:38:44 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/18/2022 12:38:44 PM
Surr: DNOP	89.3	21-129		%Rec	1	8/18/2022 12:38:44 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	8/18/2022 2:30:00 PM
Surr: BFB	104	37.7-212		%Rec	1	8/18/2022 2:30:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.020		mg/Kg	1	8/18/2022 2:30:00 PM
Toluene	ND	0.039		mg/Kg	1	8/18/2022 2:30:00 PM
Ethylbenzene	ND	0.039		mg/Kg	1	8/18/2022 2:30:00 PM
Xylenes, Total	ND	0.079		mg/Kg	1	8/18/2022 2:30:00 PM
Surr: 4-Bromofluorobenzene	99.8	70-130		%Rec	1	8/18/2022 2:30:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	190	60		mg/Kg	20	8/20/2022 2:32:34 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 4 of 8

Analytical Report

Lab Order 2208A84

Date Reported: 8/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-40 2'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/16/2022 1:00:00 PM

Lab ID: 2208A84-005

Matrix: SOIL

Received Date: 8/18/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	8/18/2022 12:52:49 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/18/2022 12:52:49 PM
Surr: DNOP	102	21-129		%Rec	1	8/18/2022 12:52:49 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	8/18/2022 2:50:00 PM
Surr: BFB	105	37.7-212		%Rec	1	8/18/2022 2:50:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.020		mg/Kg	1	8/18/2022 2:50:00 PM
Toluene	ND	0.041		mg/Kg	1	8/18/2022 2:50:00 PM
Ethylbenzene	ND	0.041		mg/Kg	1	8/18/2022 2:50:00 PM
Xylenes, Total	ND	0.081		mg/Kg	1	8/18/2022 2:50:00 PM
Surr: 4-Bromofluorobenzene	98.9	70-130		%Rec	1	8/18/2022 2:50:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	220	60		mg/Kg	20	8/20/2022 2:44:58 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2208A84

23-Aug-22

Client: Vertex Resources Services, Inc.

Project: Onyx 29 CTB1 Separator

Sample ID: MB-69605	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 69605	RunNo: 90460								
Prep Date: 8/18/2022	Analysis Date: 8/20/2022	SeqNo: 3228049	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-69605	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 69605	RunNo: 90460								
Prep Date: 8/18/2022	Analysis Date: 8/20/2022	SeqNo: 3228050	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.0	90	110			

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

Page 6 of 8

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2208A84

23-Aug-22

Client: Vertex Resources Services, Inc.**Project:** Onyx 29 CTB1 Separator

Sample ID: 2.5ug gro lcs	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: A90390		RunNo: 90390							
Prep Date:	Analysis Date: 8/18/2022		SeqNo: 3225322		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	102	72.3	137			
Surr: BFB	2200		1000		218	37.7	212			S

Sample ID: mb	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: A90390		RunNo: 90390							
Prep Date:	Analysis Date: 8/18/2022		SeqNo: 3225323		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		103	37.7	212			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2208A84

23-Aug-22

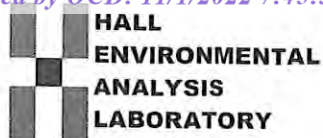
Client: Vertex Resources Services, Inc.**Project:** Onyx 29 CTB1 Separator

Sample ID: 100ng btex lcs	SampType: LCS			TestCode: EPA Method 8021B: Volatiles						
Client ID: LCSS	Batch ID: B90390			RunNo: 90390						
Prep Date:	Analysis Date: 8/18/2022			SeqNo: 3225327			Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.83	0.025	1.000	0	83.4	80	120			
Toluene	0.86	0.050	1.000	0	85.6	80	120			
Ethylbenzene	0.87	0.050	1.000	0	87.2	80	120			
Xylenes, Total	2.6	0.10	3.000	0	87.1	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		99.7	70	130			

Sample ID: mb	SampType: MBLK			TestCode: EPA Method 8021B: Volatiles						
Client ID: PBS	Batch ID: B90390			RunNo: 90390						
Prep Date:	Analysis Date: 8/18/2022			SeqNo: 3225328			Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		99.6	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Vertex Resources
Services, Inc.

Work Order Number: 2208A84

RcptNo: 1

Received By: Tracy Casarrubias 8/18/2022 7:15:00 AM

Completed By: Tracy Casarrubias 8/18/2022 8:15:24 AM

Reviewed By:

KPA 8.18.22

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. Received at least 1 vial with headspace $<1/4$ " for AQ VOA? Yes ☐ No ☐ NA ☒
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐
- # of preserved bottles checked for pH:
(<2 or >12 unless noted)
Adjusted?
Checked by: jms/18/22

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.2	Good	Yes			



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

August 22, 2022

Kent Stallings

Vertex Resources Services, Inc.

3101 Boyd Drive

Carlsbad, NM 88220

TEL: (505) 506-0040

FAX

RE: Onyx 29 CTB1

OrderNo.: 2208A82

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 9 sample(s) on 8/18/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order 2208A82

Date Reported: 8/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-01 4'

Project: Onyx 29 CTB1

Collection Date: 8/17/2022 12:00:00 PM

Lab ID: 2208A82-001

Matrix: SOIL

Received Date: 8/18/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/18/2022 1:06:46 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/18/2022 1:06:46 PM
Surr: DNOP	92.6	21-129		%Rec	1	8/18/2022 1:06:46 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	3.3		mg/Kg	1	8/18/2022 10:14:00 AM
Surr: BFB	102	37.7-212		%Rec	1	8/18/2022 10:14:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.016		mg/Kg	1	8/18/2022 10:14:00 AM
Toluene	ND	0.033		mg/Kg	1	8/18/2022 10:14:00 AM
Ethylbenzene	ND	0.033		mg/Kg	1	8/18/2022 10:14:00 AM
Xylenes, Total	ND	0.065		mg/Kg	1	8/18/2022 10:14:00 AM
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	8/18/2022 10:14:00 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	8/18/2022 10:40:35 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2208A82

Date Reported: 8/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-02 5'

Project: Onyx 29 CTB1

Collection Date: 8/17/2022 12:10:00 PM

Lab ID: 2208A82-002

Matrix: SOIL

Received Date: 8/18/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/18/2022 1:20:52 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/18/2022 1:20:52 PM
Surr: DNOP	87.8	21-129		%Rec	1	8/18/2022 1:20:52 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	3.4		mg/Kg	1	8/18/2022 10:34:00 AM
Surr: BFB	103	37.7-212		%Rec	1	8/18/2022 10:34:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.017		mg/Kg	1	8/18/2022 10:34:00 AM
Toluene	ND	0.034		mg/Kg	1	8/18/2022 10:34:00 AM
Ethylbenzene	ND	0.034		mg/Kg	1	8/18/2022 10:34:00 AM
Xylenes, Total	ND	0.069		mg/Kg	1	8/18/2022 10:34:00 AM
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	8/18/2022 10:34:00 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	8/18/2022 10:52:59 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2208A82

Date Reported: 8/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-05 5'

Project: Onyx 29 CTB1

Collection Date: 8/17/2022 12:15:00 PM

Lab ID: 2208A82-003

Matrix: SOIL

Received Date: 8/18/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/18/2022 1:34:55 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/18/2022 1:34:55 PM
Surr: DNOP	93.4	21-129		%Rec	1	8/18/2022 1:34:55 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	3.5		mg/Kg	1	8/18/2022 10:53:00 AM
Surr: BFB	102	37.7-212		%Rec	1	8/18/2022 10:53:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.018		mg/Kg	1	8/18/2022 10:53:00 AM
Toluene	ND	0.035		mg/Kg	1	8/18/2022 10:53:00 AM
Ethylbenzene	ND	0.035		mg/Kg	1	8/18/2022 10:53:00 AM
Xylenes, Total	ND	0.071		mg/Kg	1	8/18/2022 10:53:00 AM
Surr: 4-Bromofluorobenzene	99.7	70-130		%Rec	1	8/18/2022 10:53:00 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	8/18/2022 11:05:23 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 3 of 13

Analytical Report

Lab Order 2208A82

Date Reported: 8/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-06 4'

Project: Onyx 29 CTB1

Collection Date: 8/17/2022 12:20:00 PM

Lab ID: 2208A82-004

Matrix: SOIL

Received Date: 8/18/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/18/2022 1:49:01 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/18/2022 1:49:01 PM
Surr: DNOP	89.6	21-129		%Rec	1	8/18/2022 1:49:01 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	3.2		mg/Kg	1	8/18/2022 11:13:00 AM
Surr: BFB	100	37.7-212		%Rec	1	8/18/2022 11:13:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.016		mg/Kg	1	8/18/2022 11:13:00 AM
Toluene	ND	0.032		mg/Kg	1	8/18/2022 11:13:00 AM
Ethylbenzene	ND	0.032		mg/Kg	1	8/18/2022 11:13:00 AM
Xylenes, Total	ND	0.064		mg/Kg	1	8/18/2022 11:13:00 AM
Surr: 4-Bromofluorobenzene	97.0	70-130		%Rec	1	8/18/2022 11:13:00 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	8/18/2022 11:17:48 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2208A82

Date Reported: 8/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-07 4'

Project: Onyx 29 CTB1

Collection Date: 8/17/2022 12:25:00 PM

Lab ID: 2208A82-005

Matrix: SOIL

Received Date: 8/18/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/18/2022 2:02:54 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/18/2022 2:02:54 PM
Surr: DNOP	93.6	21-129		%Rec	1	8/18/2022 2:02:54 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	3.4		mg/Kg	1	8/18/2022 11:32:00 AM
Surr: BFB	99.9	37.7-212		%Rec	1	8/18/2022 11:32:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.017		mg/Kg	1	8/18/2022 11:32:00 AM
Toluene	ND	0.034		mg/Kg	1	8/18/2022 11:32:00 AM
Ethylbenzene	ND	0.034		mg/Kg	1	8/18/2022 11:32:00 AM
Xylenes, Total	ND	0.067		mg/Kg	1	8/18/2022 11:32:00 AM
Surr: 4-Bromofluorobenzene	95.5	70-130		%Rec	1	8/18/2022 11:32:00 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	59		mg/Kg	20	8/18/2022 11:30:13 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2208A82

Date Reported: 8/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-41 1'

Project: Onyx 29 CTB1

Collection Date: 8/17/2022 12:30:00 PM

Lab ID: 2208A82-006

Matrix: SOIL

Received Date: 8/18/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/18/2022 2:16:49 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/18/2022 2:16:49 PM
Surr: DNOP	83.9	21-129		%Rec	1	8/18/2022 2:16:49 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	8/18/2022 11:52:00 AM
Surr: BFB	99.9	37.7-212		%Rec	1	8/18/2022 11:52:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.018		mg/Kg	1	8/18/2022 11:52:00 AM
Toluene	ND	0.036		mg/Kg	1	8/18/2022 11:52:00 AM
Ethylbenzene	ND	0.036		mg/Kg	1	8/18/2022 11:52:00 AM
Xylenes, Total	ND	0.073		mg/Kg	1	8/18/2022 11:52:00 AM
Surr: 4-Bromofluorobenzene	97.7	70-130		%Rec	1	8/18/2022 11:52:00 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	8/18/2022 11:42:38 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2208A82

Date Reported: 8/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-42 1'

Project: Onyx 29 CTB1

Collection Date: 8/17/2022 12:35:00 PM

Lab ID: 2208A82-007

Matrix: SOIL

Received Date: 8/18/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/18/2022 2:31:03 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/18/2022 2:31:03 PM
Surr: DNOP	88.3	21-129		%Rec	1	8/18/2022 2:31:03 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	3.2		mg/Kg	1	8/18/2022 12:12:00 PM
Surr: BFB	103	37.7-212		%Rec	1	8/18/2022 12:12:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.016		mg/Kg	1	8/18/2022 12:12:00 PM
Toluene	ND	0.032		mg/Kg	1	8/18/2022 12:12:00 PM
Ethylbenzene	ND	0.032		mg/Kg	1	8/18/2022 12:12:00 PM
Xylenes, Total	ND	0.064		mg/Kg	1	8/18/2022 12:12:00 PM
Surr: 4-Bromofluorobenzene	96.7	70-130		%Rec	1	8/18/2022 12:12:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	8/18/2022 11:55:02 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 7 of 13

Analytical Report

Lab Order 2208A82

Date Reported: 8/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-43 2'

Project: Onyx 29 CTB1

Collection Date: 8/17/2022 12:40:00 PM

Lab ID: 2208A82-008

Matrix: SOIL

Received Date: 8/18/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	8/18/2022 2:44:51 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/18/2022 2:44:51 PM
Surr: DNOP	91.4	21-129		%Rec	1	8/18/2022 2:44:51 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	3.4		mg/Kg	1	8/18/2022 12:31:00 PM
Surr: BFB	97.3	37.7-212		%Rec	1	8/18/2022 12:31:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.017		mg/Kg	1	8/18/2022 12:31:00 PM
Toluene	ND	0.034		mg/Kg	1	8/18/2022 12:31:00 PM
Ethylbenzene	ND	0.034		mg/Kg	1	8/18/2022 12:31:00 PM
Xylenes, Total	ND	0.067		mg/Kg	1	8/18/2022 12:31:00 PM
Surr: 4-Bromofluorobenzene	95.0	70-130		%Rec	1	8/18/2022 12:31:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	8/18/2022 12:07:27 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 8 of 13

Analytical Report

Lab Order 2208A82

Date Reported: 8/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-44 2'

Project: Onyx 29 CTB1

Collection Date: 8/17/2022 12:45:00 PM

Lab ID: 2208A82-009

Matrix: SOIL

Received Date: 8/18/2022 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/18/2022 2:58:49 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/18/2022 2:58:49 PM
Surr: DNOP	89.2	21-129		%Rec	1	8/18/2022 2:58:49 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	3.1		mg/Kg	1	8/18/2022 12:51:00 PM
Surr: BFB	98.5	37.7-212		%Rec	1	8/18/2022 12:51:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.016		mg/Kg	1	8/18/2022 12:51:00 PM
Toluene	ND	0.031		mg/Kg	1	8/18/2022 12:51:00 PM
Ethylbenzene	ND	0.031		mg/Kg	1	8/18/2022 12:51:00 PM
Xylenes, Total	ND	0.062		mg/Kg	1	8/18/2022 12:51:00 PM
Surr: 4-Bromofluorobenzene	97.4	70-130		%Rec	1	8/18/2022 12:51:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	8/18/2022 12:44:42 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 2208A82
22-Aug-22

Client: Vertex Resources Services, Inc.
Project: Onyx 29 CTB1

Sample ID: MB-69603	SampType: mblk	TestCode: EPA Method 300.0: Anions
Client ID: PBS	Batch ID: 69603	RunNo: 90384
Prep Date: 8/18/2022	Analysis Date: 8/18/2022	SeqNo: 3226290 Units: mg/Kg
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Chloride	ND	1.5

Sample ID: LCS-69603	SampType: lcs	TestCode: EPA Method 300.0: Anions
Client ID: LCSS	Batch ID: 69603	RunNo: 90384
Prep Date: 8/18/2022	Analysis Date: 8/18/2022	SeqNo: 3226292 Units: mg/Kg
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Chloride	14	1.5 15.00 0 95.4 90 110

Qualifiers:

- *

Value exceeds Maximum Contaminant Level.
- D

Sample Diluted Due to Matrix
- H

Holding times for preparation or analysis exceeded
- ND

Not Detected at the Reporting Limit
- PQL

Practical Quantitative Limit
- S

% Recovery outside of range due to dilution or matrix interference
- B

Analyte detected in the associated Method Blank
- E

Estimated value
- J

Analyte detected below quantitation limits
- P

Sample pH Not In Range
- RL

Reporting Limit

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2208A82

22-Aug-22

Client: Vertex Resources Services, Inc.**Project:** Onyx 29 CTB1

Sample ID: 2208A82-001AMS	SampType: MS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: BES22-01 4'	Batch ID: 69593	RunNo: 90393								
Prep Date: 8/18/2022	Analysis Date: 8/18/2022	SeqNo: 3225976	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	40	14	46.73	0	85.6	36.1	154			
Surr: DNOP	3.7		4.673		79.8	21	129			

Sample ID: 2208A82-001AMSD	SampType: MSD	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: BES22-01 4'	Batch ID: 69593	RunNo: 90393								
Prep Date: 8/18/2022	Analysis Date: 8/18/2022	SeqNo: 3225977	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	14	48.12	0	90.9	36.1	154	9.02	33.9	
Surr: DNOP	4.0		4.812		82.3	21	129	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2208A82

22-Aug-22

Client: Vertex Resources Services, Inc.**Project:** Onyx 29 CTB1

Sample ID: 2.5ug gro lcs	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: A90390		RunNo: 90390							
Prep Date:	Analysis Date: 8/18/2022		SeqNo: 3225322		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	102	72.3	137			
Surr: BFB	2200		1000		218	37.7	212			S

Sample ID: mb	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: A90390		RunNo: 90390							
Prep Date:	Analysis Date: 8/18/2022		SeqNo: 3225323		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		103	37.7	212			

Sample ID: 2208a82-001ams	SampType: MS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: BES22-01 4'	Batch ID: A90390		RunNo: 90390							
Prep Date:	Analysis Date: 8/18/2022		SeqNo: 3225325		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	99.8	70	130			
Surr: BFB	2100		1000		211	37.7	212			

Sample ID: 2208a82-001amsd	SampType: MSD		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: BES22-01 4'	Batch ID: A90390		RunNo: 90390							
Prep Date:	Analysis Date: 8/18/2022		SeqNo: 3225326		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	97.5	70	130	2.39	20	
Surr: BFB	2100		1000		206	37.7	212	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2208A82

22-Aug-22

Client: Vertex Resources Services, Inc.**Project:** Onyx 29 CTB1

Sample ID: 100ng btex lcs	SampType: LCS			TestCode: EPA Method 8021B: Volatiles						
Client ID: LCSS	Batch ID: B90390			RunNo: 90390						
Prep Date:	Analysis Date: 8/18/2022			SeqNo: 3225327		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.83	0.025	1.000	0	83.4	80	120			
Toluene	0.86	0.050	1.000	0	85.6	80	120			
Ethylbenzene	0.87	0.050	1.000	0	87.2	80	120			
Xylenes, Total	2.6	0.10	3.000	0	87.1	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		99.7	70	130			

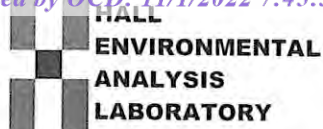
Sample ID: mb	SampType: MBLK			TestCode: EPA Method 8021B: Volatiles						
Client ID: PBS	Batch ID: B90390			RunNo: 90390						
Prep Date:	Analysis Date: 8/18/2022			SeqNo: 3225328		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		99.6	70	130			

Sample ID: 2208a82-002ams	SampType: MS			TestCode: EPA Method 8021B: Volatiles						
Client ID: BES22-02 5'	Batch ID: B90390			RunNo: 90390						
Prep Date:	Analysis Date: 8/18/2022			SeqNo: 3225329		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.88	0.025	1.000	0	88.2	68.8	120			
Toluene	0.91	0.050	1.000	0	90.5	73.6	124			
Ethylbenzene	0.92	0.050	1.000	0	91.9	72.7	129			
Xylenes, Total	2.8	0.10	3.000	0	91.8	75.7	126			
Surr: 4-Bromofluorobenzene	0.93		1.000		93.0	70	130			

Sample ID: 2208a82-002amsd	SampType: MSD			TestCode: EPA Method 8021B: Volatiles						
Client ID: BES22-02 5'	Batch ID: B90390			RunNo: 90390						
Prep Date:	Analysis Date: 8/18/2022			SeqNo: 3225330		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.85	0.025	1.000	0	85.1	68.8	120	3.60	20	
Toluene	0.87	0.050	1.000	0	87.2	73.6	124	3.69	20	
Ethylbenzene	0.89	0.050	1.000	0	88.8	72.7	129	3.42	20	
Xylenes, Total	2.7	0.10	3.000	0	88.4	75.7	126	3.86	20	
Surr: 4-Bromofluorobenzene	0.91		1.000		91.0	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Vertex Resources
Services, Inc.

Work Order Number: 2208A82

RcptNo: 1

Received By: Tracy Casarrubias 8/18/2022 7:15:00 AM

Completed By: Tracy Casarrubias 8/18/2022 8:00:00 AM

Reviewed By: KPG 8.18.22

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☐ No ☐ NA ☒
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐
of preserved bottles checked for pH:
(<2 or >12 unless noted)
Adjusted?
Checked by: JN 8/18/22

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.2	Good	Yes			

Chain-of-Custody Record

Client: Devon/Vertex

Mailing Address: on file

Phone #: 1

email or Fax#:

QA/QC Package: ☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance ☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time: ☐ Standard ☒ Rush Samuel Davis

Project Name: DNVX 29CTB1

Project #: 22E-01720-001

Project Manager: Kent Stallings

Sampler: CD

On Ice: ☒ Yes ☐ No

of Coolers: 1

Cooler Temp (including CF): 5.3-0.1-5.2 (°C)

HEAL No. 2208A82

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
8/17	12:00	501	8ES22-01 4'	402	22	001
	12:10		8ES22-02 5'			002
	12:15		8ES22-05 5'			003
	12:20		8ES22-06 4'			004
	12:25		8ES22-07 4'			005
	12:30		4ES22-41 1'			006
	12:35		4ES22-42 1'			007
	12:40		4ES22-43 2'			008
	12:45		4ES22-44 2'			009

Date: 8/17/22 Time: 1900

Relinquished by: Samuel Davis

Date: 8/17/22 Time: 7:15

Received by: Samuel Davis Date: 8/17/22 Time: 12:24

Received by: Samuel Davis Date: 8/18/22 Time: 7:15

Analysis Request

BTX / MTBE / TMBs (8021)

TPH:8015D(GRO / DRO / MRO)

8081 Pesticides/8082 PCBs

EDB (Method 504.1)

PAHs by 8310 or 8270SIMS

RCRA 8 Metals

Cl⁻, Br⁻, NO₃⁻, NO₂⁻, PO₄³⁻, SO₄²⁻

8260 (VOA)

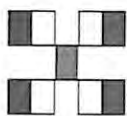
8270 (Semi-VOA)

Total Coliform (Present/Absent)

Remarks: CC: Charal Dixon

Direct Bill Devon

40#: 2102 9815



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analytical Report

Lab Order 2208C61

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-09 8'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/18/2022 2:00:00 PM

Lab ID: 2208C61-001

Matrix: SOIL

Received Date: 8/20/2022 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	13		mg/Kg	1	8/22/2022 10:13:59 AM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	8/22/2022 10:13:59 AM
Surr: DNOP	103	21-129		%Rec	1	8/22/2022 10:13:59 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	3.4		mg/Kg	1	8/22/2022 10:44:00 AM
Surr: BFB	95.7	37.7-212		%Rec	1	8/22/2022 10:44:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.017		mg/Kg	1	8/22/2022 10:44:00 AM
Toluene	ND	0.034		mg/Kg	1	8/22/2022 10:44:00 AM
Ethylbenzene	ND	0.034		mg/Kg	1	8/22/2022 10:44:00 AM
Xylenes, Total	ND	0.068		mg/Kg	1	8/22/2022 10:44:00 AM
Surr: 4-Bromofluorobenzene	91.1	70-130		%Rec	1	8/22/2022 10:44:00 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	8/22/2022 11:57:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	L	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2208C61

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-10 8'

Project: Onyx 29 CTB1 Separator

Collection Date: 8/18/2022 2:10:00 PM

Lab ID: 2208C61-002

Matrix: SOIL

Received Date: 8/20/2022 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/22/2022 10:37:55 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/22/2022 10:37:55 AM
Surr: DNOP	99.0	21-129		%Rec	1	8/22/2022 10:37:55 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	3.1		mg/Kg	1	8/22/2022 11:03:00 AM
Surr: BFB	99.5	37.7-212		%Rec	1	8/22/2022 11:03:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.015		mg/Kg	1	8/22/2022 11:03:00 AM
Toluene	ND	0.031		mg/Kg	1	8/22/2022 11:03:00 AM
Ethylbenzene	ND	0.031		mg/Kg	1	8/22/2022 11:03:00 AM
Xylenes, Total	ND	0.061		mg/Kg	1	8/22/2022 11:03:00 AM
Surr: 4-Bromofluorobenzene	91.7	70-130		%Rec	1	8/22/2022 11:03:00 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	8/22/2022 12:09:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	L	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 2 of 0

Analytical Report

Lab Order 2208G90

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22 - 45 3'

Project: Onyx 29 CT B1 Separator

Collection Date: 8/26/2022 9:30:00 AM

Lab ID: 2208G90-001

Matrix: MEOH (SOIL)

Received Date: 8/27/2022 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	8/30/2022 3:01:56 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/30/2022 3:01:56 AM
Surr: DNOP	91.4	21-129		%Rec	1	8/30/2022 3:01:56 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	8/27/2022 3:36:00 PM
Surr: BFB	110	37.7-212		%Rec	1	8/27/2022 3:36:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.020		mg/Kg	1	8/27/2022 3:36:00 PM
Toluene	ND	0.040		mg/Kg	1	8/27/2022 3:36:00 PM
Ethylbenzene	ND	0.040		mg/Kg	1	8/27/2022 3:36:00 PM
Xylenes, Total	ND	0.080		mg/Kg	1	8/27/2022 3:36:00 PM
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	8/27/2022 3:36:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	8/29/2022 5:47:50 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 1 of 0

Analytical Report

Lab Order 2208G90

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22 - 46 3'

Project: Onyx 29 CT B1 Separator

Collection Date: 8/26/2022 9:35:00 AM

Lab ID: 2208G90-002

Matrix: MEOH (SOIL)

Received Date: 8/27/2022 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/30/2022 3:13:00 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/30/2022 3:13:00 AM
Surr: DNOP	92.0	21-129		%Rec	1	8/30/2022 3:13:00 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	3.4		mg/Kg	1	8/27/2022 3:56:00 PM
Surr: BFB	103	37.7-212		%Rec	1	8/27/2022 3:56:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.017		mg/Kg	1	8/27/2022 3:56:00 PM
Toluene	ND	0.034		mg/Kg	1	8/27/2022 3:56:00 PM
Ethylbenzene	ND	0.034		mg/Kg	1	8/27/2022 3:56:00 PM
Xylenes, Total	ND	0.068		mg/Kg	1	8/27/2022 3:56:00 PM
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	8/27/2022 3:56:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	8/29/2022 6:25:03 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 2 of 0

Analytical Report

Lab Order 2208G90

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22 - 47 3'

Project: Onyx 29 CT B1 Separator

Collection Date: 8/26/2022 9:40:00 AM

Lab ID: 2208G90-003

Matrix: MEOH (SOIL)

Received Date: 8/27/2022 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/30/2022 3:34:56 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/30/2022 3:34:56 AM
Surr: DNOP	94.6	21-129		%Rec	1	8/30/2022 3:34:56 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	3.4		mg/Kg	1	8/27/2022 4:16:00 PM
Surr: BFB	111	37.7-212		%Rec	1	8/27/2022 4:16:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.017		mg/Kg	1	8/27/2022 4:16:00 PM
Toluene	ND	0.034		mg/Kg	1	8/27/2022 4:16:00 PM
Ethylbenzene	ND	0.034		mg/Kg	1	8/27/2022 4:16:00 PM
Xylenes, Total	ND	0.068		mg/Kg	1	8/27/2022 4:16:00 PM
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	8/27/2022 4:16:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	8/29/2022 6:37:28 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 3 of 0

Analytical Report

Lab Order 2208G90

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22 - 48 3'

Project: Onyx 29 CT B1 Separator

Collection Date: 8/26/2022 9:45:00 AM

Lab ID: 2208G90-004

Matrix: MEOH (SOIL)

Received Date: 8/27/2022 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	8/30/2022 3:45:57 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	8/30/2022 3:45:57 AM
Surr: DNOP	96.0	21-129		%Rec	1	8/30/2022 3:45:57 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	8/27/2022 4:35:00 PM
Surr: BFB	108	37.7-212		%Rec	1	8/27/2022 4:35:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.019		mg/Kg	1	8/27/2022 4:35:00 PM
Toluene	ND	0.039		mg/Kg	1	8/27/2022 4:35:00 PM
Ethylbenzene	ND	0.039		mg/Kg	1	8/27/2022 4:35:00 PM
Xylenes, Total	ND	0.077		mg/Kg	1	8/27/2022 4:35:00 PM
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	8/27/2022 4:35:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	8/29/2022 6:49:53 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 4 of 0

Analytical Report

Lab Order 2208G90

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22 - 49 1'

Project: Onyx 29 CT B1 Separator

Collection Date: 8/26/2022 9:50:00 AM

Lab ID: 2208G90-005

Matrix: MEOH (SOIL)

Received Date: 8/27/2022 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	8/30/2022 3:56:59 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/30/2022 3:56:59 AM
Surr: DNOP	93.8	21-129		%Rec	1	8/30/2022 3:56:59 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	3.7		mg/Kg	1	8/27/2022 4:55:00 PM
Surr: BFB	109	37.7-212		%Rec	1	8/27/2022 4:55:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.018		mg/Kg	1	8/27/2022 4:55:00 PM
Toluene	ND	0.037		mg/Kg	1	8/27/2022 4:55:00 PM
Ethylbenzene	ND	0.037		mg/Kg	1	8/27/2022 4:55:00 PM
Xylenes, Total	ND	0.073		mg/Kg	1	8/27/2022 4:55:00 PM
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	8/27/2022 4:55:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	8/29/2022 7:02:17 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 5 of 0

Analytical Report

Lab Order 2208G90

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22 - 50 0.5'

Project: Onyx 29 CT B1 Separator

Collection Date: 8/26/2022 9:55:00 AM

Lab ID: 2208G90-006

Matrix: MEOH (SOIL)

Received Date: 8/27/2022 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	8/30/2022 4:07:53 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/30/2022 4:07:53 AM
Surr: DNOP	86.0	21-129		%Rec	1	8/30/2022 4:07:53 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	3.7		mg/Kg	1	8/27/2022 5:34:00 PM
Surr: BFB	107	37.7-212		%Rec	1	8/27/2022 5:34:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.018		mg/Kg	1	8/27/2022 5:34:00 PM
Toluene	ND	0.037		mg/Kg	1	8/27/2022 5:34:00 PM
Ethylbenzene	ND	0.037		mg/Kg	1	8/27/2022 5:34:00 PM
Xylenes, Total	ND	0.073		mg/Kg	1	8/27/2022 5:34:00 PM
Surr: 4-Bromofluorobenzene	99.5	70-130		%Rec	1	8/27/2022 5:34:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	8/29/2022 7:14:42 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 6 of 0

Analytical Report

Lab Order 2208G90

Date Reported:

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22 - 23 1'

Project: Onyx 29 CT B1 Separator

Collection Date: 8/26/2022 10:00:00 AM

Lab ID: 2208G90-007

Matrix: MEOH (SOIL)

Received Date: 8/27/2022 9:35:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	8/30/2022 4:18:41 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/30/2022 4:18:41 AM
Surr: DNOP	88.1	21-129		%Rec	1	8/30/2022 4:18:41 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	3.4		mg/Kg	1	8/27/2022 5:54:00 PM
Surr: BFB	102	37.7-212		%Rec	1	8/27/2022 5:54:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.017		mg/Kg	1	8/27/2022 5:54:00 PM
Toluene	ND	0.034		mg/Kg	1	8/27/2022 5:54:00 PM
Ethylbenzene	ND	0.034		mg/Kg	1	8/27/2022 5:54:00 PM
Xylenes, Total	ND	0.068		mg/Kg	1	8/27/2022 5:54:00 PM
Surr: 4-Bromofluorobenzene	98.5	70-130		%Rec	1	8/27/2022 5:54:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	8/29/2022 7:27:06 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 7 of 0



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 07, 2022

Monica Peppin

Vertex Resources Services, Inc.

3101 Boyd Drive

Carlsbad, NM 88220

TEL: (505) 506-0040

FAX:

RE: Onyx 29 CTB1

OrderNo.: 2205B74

Dear Monica Peppin:

Hall Environmental Analysis Laboratory received 23 sample(s) on 5/26/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order 2205B74

Date Reported: 6/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-01 0'

Project: Onyx 29 CTB1

Collection Date: 5/24/2022 8:30:00 AM

Lab ID: 2205B74-001

Matrix: SOIL

Received Date: 5/26/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: ED
Diesel Range Organics (DRO)	20	9.6		mg/Kg	1	5/31/2022 3:47:57 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	5/31/2022 3:47:57 PM
Surr: DNOP	61.6	51.1-141		%Rec	1	5/31/2022 3:47:57 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	5/28/2022 2:22:02 AM
Surr: BFB	91.4	37.7-212		%Rec	1	5/28/2022 2:22:02 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	5/28/2022 2:22:02 AM
Toluene	ND	0.047		mg/Kg	1	5/28/2022 2:22:02 AM
Ethylbenzene	ND	0.047		mg/Kg	1	5/28/2022 2:22:02 AM
Xylenes, Total	ND	0.093		mg/Kg	1	5/28/2022 2:22:02 AM
Surr: 4-Bromofluorobenzene	93.8	70-130		%Rec	1	5/28/2022 2:22:02 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	61		mg/Kg	20	6/1/2022 10:34:46 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 1 of 31

Analytical Report

Lab Order 2205B74

Date Reported: 6/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-02 0'

Project: Onyx 29 CTB1

Collection Date: 5/24/2022 8:40:00 AM

Lab ID: 2205B74-002

Matrix: SOIL

Received Date: 5/26/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: ED
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	5/31/2022 4:11:53 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	5/31/2022 4:11:53 PM
Surr: DNOP	57.9	51.1-141		%Rec	1	5/31/2022 4:11:53 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	5/28/2022 3:32:52 AM
Surr: BFB	97.7	37.7-212		%Rec	1	5/28/2022 3:32:52 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	5/28/2022 3:32:52 AM
Toluene	ND	0.047		mg/Kg	1	5/28/2022 3:32:52 AM
Ethylbenzene	ND	0.047		mg/Kg	1	5/28/2022 3:32:52 AM
Xylenes, Total	ND	0.095		mg/Kg	1	5/28/2022 3:32:52 AM
Surr: 4-Bromofluorobenzene	98.0	70-130		%Rec	1	5/28/2022 3:32:52 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	5400	300		mg/Kg	100	6/2/2022 12:06:38 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 2 of 31

Analytical Report

Lab Order 2205B74

Date Reported: 6/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-02 2'

Project: Onyx 29 CTB1

Collection Date: 5/24/2022 8:45:00 AM

Lab ID: 2205B74-003

Matrix: SOIL

Received Date: 5/26/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: ED
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	5/31/2022 4:35:37 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	5/31/2022 4:35:37 PM
Surr: DNOP	64.1	51.1-141		%Rec	1	5/31/2022 4:35:37 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/28/2022 3:56:23 AM
Surr: BFB	96.6	37.7-212		%Rec	1	5/28/2022 3:56:23 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	5/28/2022 3:56:23 AM
Toluene	ND	0.049		mg/Kg	1	5/28/2022 3:56:23 AM
Ethylbenzene	ND	0.049		mg/Kg	1	5/28/2022 3:56:23 AM
Xylenes, Total	ND	0.098		mg/Kg	1	5/28/2022 3:56:23 AM
Surr: 4-Bromofluorobenzene	97.0	70-130		%Rec	1	5/28/2022 3:56:23 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	2700	150		mg/Kg	50	6/2/2022 12:19:03 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 3 of 31

Analytical Report

Lab Order 2205B74

Date Reported: 6/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-02 4'

Project: Onyx 29 CTB1

Collection Date: 5/24/2022 1:15:00 PM

Lab ID: 2205B74-004

Matrix: SOIL

Received Date: 5/26/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: ED
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	5/31/2022 4:59:23 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	5/31/2022 4:59:23 PM
Surr: DNOP	59.9	51.1-141		%Rec	1	5/31/2022 4:59:23 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	5/28/2022 4:20:05 AM
Surr: BFB	98.0	37.7-212		%Rec	1	5/28/2022 4:20:05 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	5/28/2022 4:20:05 AM
Toluene	ND	0.046		mg/Kg	1	5/28/2022 4:20:05 AM
Ethylbenzene	ND	0.046		mg/Kg	1	5/28/2022 4:20:05 AM
Xylenes, Total	ND	0.092		mg/Kg	1	5/28/2022 4:20:05 AM
Surr: 4-Bromofluorobenzene	97.1	70-130		%Rec	1	5/28/2022 4:20:05 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	260	61		mg/Kg	20	6/2/2022 12:01:38 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 4 of 31

Analytical Report

Lab Order 2205B74

Date Reported: 6/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-03 0'

Project: Onyx 29 CTB1

Collection Date: 5/24/2022 8:50:00 AM

Lab ID: 2205B74-005

Matrix: SOIL

Received Date: 5/26/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: ED
Diesel Range Organics (DRO)	4100	95		mg/Kg	10	6/1/2022 12:24:41 PM
Motor Oil Range Organics (MRO)	2400	470		mg/Kg	10	6/1/2022 12:24:41 PM
Surr: DNOP	0	51.1-141	S	%Rec	10	6/1/2022 12:24:41 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	5/28/2022 4:43:44 AM
Surr: BFB	93.4	37.7-212		%Rec	1	5/28/2022 4:43:44 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	5/28/2022 4:43:44 AM
Toluene	ND	0.047		mg/Kg	1	5/28/2022 4:43:44 AM
Ethylbenzene	ND	0.047		mg/Kg	1	5/28/2022 4:43:44 AM
Xylenes, Total	ND	0.094		mg/Kg	1	5/28/2022 4:43:44 AM
Surr: 4-Bromofluorobenzene	93.0	70-130		%Rec	1	5/28/2022 4:43:44 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	5500	150		mg/Kg	50	6/2/2022 12:31:27 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 5 of 31

Analytical Report

Lab Order 2205B74

Date Reported: 6/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-03 2'

Project: Onyx 29 CTB1

Collection Date: 5/24/2022 8:55:00 AM

Lab ID: 2205B74-006

Matrix: SOIL

Received Date: 5/26/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: ED
Diesel Range Organics (DRO)	240	9.6		mg/Kg	1	6/1/2022 1:12:26 PM
Motor Oil Range Organics (MRO)	140	48		mg/Kg	1	6/1/2022 1:12:26 PM
Surr: DNOP	93.2	51.1-141		%Rec	1	6/1/2022 1:12:26 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/28/2022 5:30:59 AM
Surr: BFB	96.0	37.7-212		%Rec	1	5/28/2022 5:30:59 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	5/28/2022 5:30:59 AM
Toluene	ND	0.049		mg/Kg	1	5/28/2022 5:30:59 AM
Ethylbenzene	ND	0.049		mg/Kg	1	5/28/2022 5:30:59 AM
Xylenes, Total	ND	0.099		mg/Kg	1	5/28/2022 5:30:59 AM
Surr: 4-Bromofluorobenzene	98.5	70-130		%Rec	1	5/28/2022 5:30:59 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	3700	150		mg/Kg	50	6/2/2022 1:08:39 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 6 of 31

Analytical Report

Lab Order 2205B74

Date Reported: 6/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-04 0'

Project: Onyx 29 CTB1

Collection Date: 5/24/2022 9:00:00 AM

Lab ID: 2205B74-007

Matrix: SOIL

Received Date: 5/26/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: ED
Diesel Range Organics (DRO)	12	9.0		mg/Kg	1	5/31/2022 6:11:58 PM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	5/31/2022 6:11:58 PM
Surr: DNOP	75.3	51.1-141		%Rec	1	5/31/2022 6:11:58 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/28/2022 5:54:36 AM
Surr: BFB	99.6	37.7-212		%Rec	1	5/28/2022 5:54:36 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	5/28/2022 5:54:36 AM
Toluene	ND	0.048		mg/Kg	1	5/28/2022 5:54:36 AM
Ethylbenzene	ND	0.048		mg/Kg	1	5/28/2022 5:54:36 AM
Xylenes, Total	ND	0.097		mg/Kg	1	5/28/2022 5:54:36 AM
Surr: 4-Bromofluorobenzene	95.7	70-130		%Rec	1	5/28/2022 5:54:36 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	98	60		mg/Kg	20	6/2/2022 12:38:51 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 7 of 31

Analytical Report

Lab Order 2205B74

Date Reported: 6/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-05 0'

Project: Onyx 29 CTB1

Collection Date: 5/24/2022 9:10:00 AM

Lab ID: 2205B74-008

Matrix: SOIL

Received Date: 5/26/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: ED
Diesel Range Organics (DRO)	29	9.4		mg/Kg	1	5/31/2022 6:36:29 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	5/31/2022 6:36:29 PM
Surr: DNOP	78.6	51.1-141		%Rec	1	5/31/2022 6:36:29 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	5/28/2022 6:18:19 AM
Surr: BFB	93.9	37.7-212		%Rec	1	5/28/2022 6:18:19 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	5/28/2022 6:18:19 AM
Toluene	ND	0.046		mg/Kg	1	5/28/2022 6:18:19 AM
Ethylbenzene	ND	0.046		mg/Kg	1	5/28/2022 6:18:19 AM
Xylenes, Total	ND	0.092		mg/Kg	1	5/28/2022 6:18:19 AM
Surr: 4-Bromofluorobenzene	95.2	70-130		%Rec	1	5/28/2022 6:18:19 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	73	60		mg/Kg	20	6/2/2022 12:51:17 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 8 of 31

Analytical Report

Lab Order 2205B74

Date Reported: 6/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-06 0'

Project: Onyx 29 CTB1

Collection Date: 5/24/2022 9:15:00 AM

Lab ID: 2205B74-009

Matrix: SOIL

Received Date: 5/26/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: ED
Diesel Range Organics (DRO)	17	10		mg/Kg	1	5/31/2022 7:00:53 PM
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	5/31/2022 7:00:53 PM
Surr: DNOP	71.5	51.1-141		%Rec	1	5/31/2022 7:00:53 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	5/28/2022 6:41:58 AM
Surr: BFB	94.5	37.7-212		%Rec	1	5/28/2022 6:41:58 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	5/28/2022 6:41:58 AM
Toluene	ND	0.047		mg/Kg	1	5/28/2022 6:41:58 AM
Ethylbenzene	ND	0.047		mg/Kg	1	5/28/2022 6:41:58 AM
Xylenes, Total	ND	0.093		mg/Kg	1	5/28/2022 6:41:58 AM
Surr: 4-Bromofluorobenzene	96.2	70-130		%Rec	1	5/28/2022 6:41:58 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	5000	150		mg/Kg	50	6/2/2022 1:21:03 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 9 of 31

Analytical Report

Lab Order 2205B74

Date Reported: 6/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-06 2'

Project: Onyx 29 CTB1

Collection Date: 5/24/2022 9:20:00 AM

Lab ID: 2205B74-010

Matrix: SOIL

Received Date: 5/26/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: ED
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	5/31/2022 7:25:13 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	5/31/2022 7:25:13 PM
Surr: DNOP	69.8	51.1-141		%Rec	1	5/31/2022 7:25:13 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/28/2022 7:05:38 AM
Surr: BFB	91.8	37.7-212		%Rec	1	5/28/2022 7:05:38 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	5/28/2022 7:05:38 AM
Toluene	ND	0.049		mg/Kg	1	5/28/2022 7:05:38 AM
Ethylbenzene	ND	0.049		mg/Kg	1	5/28/2022 7:05:38 AM
Xylenes, Total	ND	0.097		mg/Kg	1	5/28/2022 7:05:38 AM
Surr: 4-Bromofluorobenzene	96.5	70-130		%Rec	1	5/28/2022 7:05:38 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	4500	150		mg/Kg	50	6/2/2022 1:33:28 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2205B74

Date Reported: 6/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-06 6'

Project: Onyx 29 CTB1

Collection Date: 5/24/2022 1:45:00 PM

Lab ID: 2205B74-011

Matrix: SOIL

Received Date: 5/26/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: ED
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	5/31/2022 7:49:27 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	5/31/2022 7:49:27 PM
Surr: DNOP	71.5	51.1-141		%Rec	1	5/31/2022 7:49:27 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	5/28/2022 7:29:19 AM
Surr: BFB	92.6	37.7-212		%Rec	1	5/28/2022 7:29:19 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	5/28/2022 7:29:19 AM
Toluene	ND	0.046		mg/Kg	1	5/28/2022 7:29:19 AM
Ethylbenzene	ND	0.046		mg/Kg	1	5/28/2022 7:29:19 AM
Xylenes, Total	ND	0.092		mg/Kg	1	5/28/2022 7:29:19 AM
Surr: 4-Bromofluorobenzene	93.9	70-130		%Rec	1	5/28/2022 7:29:19 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	120	60		mg/Kg	20	6/2/2022 1:28:30 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2205B74

Date Reported: 6/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-07 0'

Project: Onyx 29 CTB1

Collection Date: 5/24/2022 10:20:00 AM

Lab ID: 2205B74-012

Matrix: SOIL

Received Date: 5/26/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	5/27/2022 1:09:32 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	5/27/2022 1:09:32 PM
Surr: DNOP	78.1	51.1-141		%Rec	1	5/27/2022 1:09:32 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	100	60		mg/Kg	20	6/2/2022 1:40:54 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.025		mg/Kg	1	5/27/2022 1:54:40 PM
Toluene	ND	0.050		mg/Kg	1	5/27/2022 1:54:40 PM
Ethylbenzene	ND	0.050		mg/Kg	1	5/27/2022 1:54:40 PM
Xylenes, Total	ND	0.10		mg/Kg	1	5/27/2022 1:54:40 PM
Surr: 1,2-Dichloroethane-d4	97.6	70-130		%Rec	1	5/27/2022 1:54:40 PM
Surr: 4-Bromofluorobenzene	94.3	70-130		%Rec	1	5/27/2022 1:54:40 PM
Surr: Dibromofluoromethane	111	70-130		%Rec	1	5/27/2022 1:54:40 PM
Surr: Toluene-d8	99.1	70-130		%Rec	1	5/27/2022 1:54:40 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/27/2022 1:54:40 PM
Surr: BFB	107	70-130		%Rec	1	5/27/2022 1:54:40 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2205B74

Date Reported: 6/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-08 0'

Project: Onyx 29 CTB1

Collection Date: 5/24/2022 9:25:00 AM

Lab ID: 2205B74-013

Matrix: SOIL

Received Date: 5/26/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	7100	94		mg/Kg	10	5/27/2022 7:21:06 PM
Motor Oil Range Organics (MRO)	4700	470		mg/Kg	10	5/27/2022 7:21:06 PM
Surr: DNOP	0	51.1-141	S	%Rec	10	5/27/2022 7:21:06 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	1300	61		mg/Kg	20	6/2/2022 2:18:07 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.024		mg/Kg	1	5/27/2022 3:20:57 PM
Toluene	ND	0.048		mg/Kg	1	5/27/2022 3:20:57 PM
Ethylbenzene	ND	0.048		mg/Kg	1	5/27/2022 3:20:57 PM
Xylenes, Total	ND	0.095		mg/Kg	1	5/27/2022 3:20:57 PM
Surr: 1,2-Dichloroethane-d4	97.7	70-130		%Rec	1	5/27/2022 3:20:57 PM
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	5/27/2022 3:20:57 PM
Surr: Dibromofluoromethane	114	70-130		%Rec	1	5/27/2022 3:20:57 PM
Surr: Toluene-d8	98.1	70-130		%Rec	1	5/27/2022 3:20:57 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/27/2022 3:20:57 PM
Surr: BFB	109	70-130		%Rec	1	5/27/2022 3:20:57 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2205B74

Date Reported: 6/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-08 2'

Project: Onyx 29 CTB1

Collection Date: 5/24/2022 9:30:00 AM

Lab ID: 2205B74-014

Matrix: SOIL

Received Date: 5/26/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	76	10		mg/Kg	1	5/27/2022 1:33:59 PM
Motor Oil Range Organics (MRO)	72	50		mg/Kg	1	5/27/2022 1:33:59 PM
Surr: DNOP	98.3	51.1-141		%Rec	1	5/27/2022 1:33:59 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	4700	150		mg/Kg	50	6/2/2022 1:45:52 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.024		mg/Kg	1	5/27/2022 4:47:23 PM
Toluene	ND	0.048		mg/Kg	1	5/27/2022 4:47:23 PM
Ethylbenzene	ND	0.048		mg/Kg	1	5/27/2022 4:47:23 PM
Xylenes, Total	ND	0.096		mg/Kg	1	5/27/2022 4:47:23 PM
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	1	5/27/2022 4:47:23 PM
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	5/27/2022 4:47:23 PM
Surr: Dibromofluoromethane	119	70-130		%Rec	1	5/27/2022 4:47:23 PM
Surr: Toluene-d8	96.9	70-130		%Rec	1	5/27/2022 4:47:23 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/27/2022 4:47:23 PM
Surr: BFB	107	70-130		%Rec	1	5/27/2022 4:47:23 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2205B74

Date Reported: 6/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-08 5'

Project: Onyx 29 CTB1

Collection Date: 5/24/2022 1:40:00 PM

Lab ID: 2205B74-015

Matrix: SOIL

Received Date: 5/26/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	120	9.4		mg/Kg	1	5/27/2022 1:58:24 PM
Diesel Range Organics (DRO)	ND			mg/Kg	1	5/27/2022 1:58:24 PM
Motor Oil Range Organics (MRO)	ND			mg/Kg	1	5/27/2022 1:58:24 PM
Motor Oil Range Organics (MRO)	120	47		mg/Kg	1	5/27/2022 1:58:24 PM
Surr: DNOP			-	%Rec	1	5/27/2022 1:58:24 PM
Surr: DNOP	104	51.1-141		%Rec	1	5/27/2022 1:58:24 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	720	60		mg/Kg	20	6/2/2022 2:42:57 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.025		mg/Kg	1	5/27/2022 5:16:12 PM
Toluene	ND	0.050		mg/Kg	1	5/27/2022 5:16:12 PM
Ethylbenzene	ND	0.050		mg/Kg	1	5/27/2022 5:16:12 PM
Xylenes, Total	ND	0.099		mg/Kg	1	5/27/2022 5:16:12 PM
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	5/27/2022 5:16:12 PM
Surr: 4-Bromofluorobenzene	97.9	70-130		%Rec	1	5/27/2022 5:16:12 PM
Surr: Dibromofluoromethane	122	70-130		%Rec	1	5/27/2022 5:16:12 PM
Surr: Toluene-d8	96.8	70-130		%Rec	1	5/27/2022 5:16:12 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/27/2022 5:16:12 PM
Surr: BFB	108	70-130		%Rec	1	5/27/2022 5:16:12 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2205B74

Date Reported: 6/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-09 0'

Project: Onyx 29 CTB1

Collection Date: 5/24/2022 9:35:00 AM

Lab ID: 2205B74-016

Matrix: SOIL

Received Date: 5/26/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	16	9.3		mg/Kg	1	5/31/2022 12:32:21 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	5/31/2022 12:32:21 PM
Surr: DNOP	82.5	51.1-141		%Rec	1	5/31/2022 12:32:21 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	370	60		mg/Kg	20	6/2/2022 2:55:22 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.024		mg/Kg	1	5/27/2022 5:45:01 PM
Toluene	ND	0.049		mg/Kg	1	5/27/2022 5:45:01 PM
Ethylbenzene	ND	0.049		mg/Kg	1	5/27/2022 5:45:01 PM
Xylenes, Total	ND	0.098		mg/Kg	1	5/27/2022 5:45:01 PM
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	5/27/2022 5:45:01 PM
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	5/27/2022 5:45:01 PM
Surr: Dibromofluoromethane	116	70-130		%Rec	1	5/27/2022 5:45:01 PM
Surr: Toluene-d8	98.6	70-130		%Rec	1	5/27/2022 5:45:01 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/27/2022 5:45:01 PM
Surr: BFB	109	70-130		%Rec	1	5/27/2022 5:45:01 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2205B74

Date Reported: 6/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-10 0'

Project: Onyx 29 CTB1

Collection Date: 5/24/2022 9:45:00 AM

Lab ID: 2205B74-017

Matrix: SOIL

Received Date: 5/26/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	390	9.7		mg/Kg	1	5/27/2022 2:22:47 PM
Motor Oil Range Organics (MRO)	370	48		mg/Kg	1	5/27/2022 2:22:47 PM
Surr: DNOP	104	51.1-141		%Rec	1	5/27/2022 2:22:47 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	20000	1500		mg/Kg	500	6/2/2022 1:58:16 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.024		mg/Kg	1	5/27/2022 6:13:46 PM
Toluene	ND	0.049		mg/Kg	1	5/27/2022 6:13:46 PM
Ethylbenzene	ND	0.049		mg/Kg	1	5/27/2022 6:13:46 PM
Xylenes, Total	ND	0.098		mg/Kg	1	5/27/2022 6:13:46 PM
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	1	5/27/2022 6:13:46 PM
Surr: 4-Bromofluorobenzene	96.7	70-130		%Rec	1	5/27/2022 6:13:46 PM
Surr: Dibromofluoromethane	115	70-130		%Rec	1	5/27/2022 6:13:46 PM
Surr: Toluene-d8	97.1	70-130		%Rec	1	5/27/2022 6:13:46 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/27/2022 6:13:46 PM
Surr: BFB	107	70-130		%Rec	1	5/27/2022 6:13:46 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2205B74

Date Reported: 6/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-10 2'

Project: Onyx 29 CTB1

Collection Date: 5/24/2022 9:50:00 AM

Lab ID: 2205B74-018

Matrix: SOIL

Received Date: 5/26/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: ED
Diesel Range Organics (DRO)	49	10		mg/Kg	1	5/31/2022 8:37:47 PM
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	5/31/2022 8:37:47 PM
Surr: DNOP	71.7	51.1-141		%Rec	1	5/31/2022 8:37:47 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	7200	300		mg/Kg	100	6/2/2022 2:10:40 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.024		mg/Kg	1	5/27/2022 6:42:26 PM
Toluene	ND	0.048		mg/Kg	1	5/27/2022 6:42:26 PM
Ethylbenzene	ND	0.048		mg/Kg	1	5/27/2022 6:42:26 PM
Xylenes, Total	ND	0.097		mg/Kg	1	5/27/2022 6:42:26 PM
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	5/27/2022 6:42:26 PM
Surr: 4-Bromofluorobenzene	98.9	70-130		%Rec	1	5/27/2022 6:42:26 PM
Surr: Dibromofluoromethane	116	70-130		%Rec	1	5/27/2022 6:42:26 PM
Surr: Toluene-d8	98.6	70-130		%Rec	1	5/27/2022 6:42:26 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/27/2022 6:42:26 PM
Surr: BFB	109	70-130		%Rec	1	5/27/2022 6:42:26 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2205B74

Date Reported: 6/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-10 3'

Project: Onyx 29 CTB1

Collection Date: 5/24/2022 1:10:00 PM

Lab ID: 2205B74-019

Matrix: SOIL

Received Date: 5/26/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	5/27/2022 3:11:44 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	5/27/2022 3:11:44 PM
Surr: DNOP	58.5	51.1-141		%Rec	1	5/27/2022 3:11:44 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	430	60		mg/Kg	20	6/2/2022 3:32:36 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.024		mg/Kg	1	5/27/2022 7:11:06 PM
Toluene	ND	0.047		mg/Kg	1	5/27/2022 7:11:06 PM
Ethylbenzene	ND	0.047		mg/Kg	1	5/27/2022 7:11:06 PM
Xylenes, Total	ND	0.094		mg/Kg	1	5/27/2022 7:11:06 PM
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	5/27/2022 7:11:06 PM
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	5/27/2022 7:11:06 PM
Surr: Dibromofluoromethane	115	70-130		%Rec	1	5/27/2022 7:11:06 PM
Surr: Toluene-d8	99.5	70-130		%Rec	1	5/27/2022 7:11:06 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	5/27/2022 7:11:06 PM
Surr: BFB	109	70-130		%Rec	1	5/27/2022 7:11:06 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 19 of 31

Analytical Report

Lab Order 2205B74

Date Reported: 6/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-11 0'

Project: Onyx 29 CTB1

Collection Date: 5/24/2022 9:55:00 AM

Lab ID: 2205B74-020

Matrix: SOIL

Received Date: 5/26/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	5/27/2022 3:36:12 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	5/27/2022 3:36:12 PM
Surr: DNOP	51.5	51.1-141		%Rec	1	5/27/2022 3:36:12 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	230	60		mg/Kg	20	6/1/2022 5:14:13 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.024		mg/Kg	1	5/27/2022 7:39:44 PM
Toluene	ND	0.048		mg/Kg	1	5/27/2022 7:39:44 PM
Ethylbenzene	ND	0.048		mg/Kg	1	5/27/2022 7:39:44 PM
Xylenes, Total	ND	0.097		mg/Kg	1	5/27/2022 7:39:44 PM
Surr: 1,2-Dichloroethane-d4	96.3	70-130		%Rec	1	5/27/2022 7:39:44 PM
Surr: 4-Bromofluorobenzene	96.2	70-130		%Rec	1	5/27/2022 7:39:44 PM
Surr: Dibromofluoromethane	114	70-130		%Rec	1	5/27/2022 7:39:44 PM
Surr: Toluene-d8	100	70-130		%Rec	1	5/27/2022 7:39:44 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/27/2022 7:39:44 PM
Surr: BFB	108	70-130		%Rec	1	5/27/2022 7:39:44 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2205B74

Date Reported: 6/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-12 0'

Project: Onyx 29 CTB1

Collection Date: 5/24/2022 10:05:00 AM

Lab ID: 2205B74-021

Matrix: SOIL

Received Date: 5/26/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	5/27/2022 4:00:38 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	5/27/2022 4:00:38 PM
Surr: DNOP	59.9	51.1-141		%Rec	1	5/27/2022 4:00:38 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	17000	600		mg/Kg	200	6/2/2022 10:39:49 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.025		mg/Kg	1	5/27/2022 8:08:26 PM
Toluene	ND	0.049		mg/Kg	1	5/27/2022 8:08:26 PM
Ethylbenzene	ND	0.049		mg/Kg	1	5/27/2022 8:08:26 PM
Xylenes, Total	ND	0.099		mg/Kg	1	5/27/2022 8:08:26 PM
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	5/27/2022 8:08:26 PM
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	5/27/2022 8:08:26 PM
Surr: Dibromofluoromethane	113	70-130		%Rec	1	5/27/2022 8:08:26 PM
Surr: Toluene-d8	101	70-130		%Rec	1	5/27/2022 8:08:26 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/27/2022 8:08:26 PM
Surr: BFB	113	70-130		%Rec	1	5/27/2022 8:08:26 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2205B74

Date Reported: 6/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-12 2'

Project: Onyx 29 CTB1

Collection Date: 5/24/2022 10:10:00 AM

Lab ID: 2205B74-022

Matrix: SOIL

Received Date: 5/26/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: ED
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	5/31/2022 9:01:57 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	5/31/2022 9:01:57 PM
Surr: DNOP	58.7	51.1-141		%Rec	1	5/31/2022 9:01:57 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	230	60		mg/Kg	20	6/1/2022 6:03:37 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.025		mg/Kg	1	5/27/2022 8:37:02 PM
Toluene	ND	0.049		mg/Kg	1	5/27/2022 8:37:02 PM
Ethylbenzene	ND	0.049		mg/Kg	1	5/27/2022 8:37:02 PM
Xylenes, Total	ND	0.099		mg/Kg	1	5/27/2022 8:37:02 PM
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	1	5/27/2022 8:37:02 PM
Surr: 4-Bromofluorobenzene	98.0	70-130		%Rec	1	5/27/2022 8:37:02 PM
Surr: Dibromofluoromethane	114	70-130		%Rec	1	5/27/2022 8:37:02 PM
Surr: Toluene-d8	100	70-130		%Rec	1	5/27/2022 8:37:02 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/27/2022 8:37:02 PM
Surr: BFB	107	70-130		%Rec	1	5/27/2022 8:37:02 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2205B74

Date Reported: 6/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-03 5'

Project: Onyx 29 CTB1

Collection Date: 5/24/2022 1:35:00 PM

Lab ID: 2205B74-023

Matrix: SOIL

Received Date: 5/26/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	480	9.9		mg/Kg	1	5/27/2022 4:49:38 PM
Motor Oil Range Organics (MRO)	460	49		mg/Kg	1	5/27/2022 4:49:38 PM
Surr: DNOP	113	51.1-141		%Rec	1	5/27/2022 4:49:38 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	640	60		mg/Kg	20	6/1/2022 6:15:57 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.024		mg/Kg	1	5/27/2022 9:05:34 PM
Toluene	ND	0.049		mg/Kg	1	5/27/2022 9:05:34 PM
Ethylbenzene	ND	0.049		mg/Kg	1	5/27/2022 9:05:34 PM
Xylenes, Total	ND	0.098		mg/Kg	1	5/27/2022 9:05:34 PM
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	5/27/2022 9:05:34 PM
Surr: 4-Bromofluorobenzene	95.1	70-130		%Rec	1	5/27/2022 9:05:34 PM
Surr: Dibromofluoromethane	111	70-130		%Rec	1	5/27/2022 9:05:34 PM
Surr: Toluene-d8	97.1	70-130		%Rec	1	5/27/2022 9:05:34 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/27/2022 9:05:34 PM
Surr: BFB	105	70-130		%Rec	1	5/27/2022 9:05:34 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2205B74

07-Jun-22

Client: Vertex Resources Services, Inc.**Project:** Onyx 29 CTB1

Sample ID: MB-67840	SampType: mblk		TestCode: EPA Method 300.0: Anions							
Client ID: PBS	Batch ID: 67840		RunNo: 88422							
Prep Date: 6/1/2022	Analysis Date: 6/1/2022		SeqNo: 3137024		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-67840	SampType: lcs		TestCode: EPA Method 300.0: Anions							
Client ID: LCSS	Batch ID: 67840		RunNo: 88422							
Prep Date: 6/1/2022	Analysis Date: 6/1/2022		SeqNo: 3137025		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.6	90	110			

Sample ID: MB-67832	SampType: mblk		TestCode: EPA Method 300.0: Anions							
Client ID: PBS	Batch ID: 67832		RunNo: 88432							
Prep Date: 6/1/2022	Analysis Date: 6/1/2022		SeqNo: 3137379		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-67832	SampType: lcs		TestCode: EPA Method 300.0: Anions							
Client ID: LCSS	Batch ID: 67832		RunNo: 88432							
Prep Date: 6/1/2022	Analysis Date: 6/1/2022		SeqNo: 3137380		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.2	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2205B74

07-Jun-22

Client: Vertex Resources Services, Inc.**Project:** Onyx 29 CTB1

Sample ID: LCS-67737	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 67737	RunNo: 88332								
Prep Date: 5/26/2022	Analysis Date: 5/27/2022	SeqNo: 3132996 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	40	10	50.00	0	80.3	64.4	127			
Surr: DNOP	4.1		5.000		81.2	51.1	141			

Sample ID: MB-67737	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 67737	RunNo: 88332								
Prep Date: 5/26/2022	Analysis Date: 5/27/2022	SeqNo: 3132997 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.2		10.00		92.1	51.1	141			

Sample ID: 2205B74-012AMSD	SampType: MSD	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: BH22-07 0'	Batch ID: 67737	RunNo: 88332								
Prep Date: 5/26/2022	Analysis Date: 5/27/2022	SeqNo: 3134548 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	39	9.5	47.66	0	82.1	36.1	154	11.6	33.9	
Surr: DNOP	1.0		4.766		21.5	51.1	141	0	0	S

Sample ID: MB-67765	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 67765	RunNo: 88381								
Prep Date: 5/27/2022	Analysis Date: 5/31/2022	SeqNo: 3135345 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	6.8		10.00		68.2	51.1	141			

Sample ID: 2205B74-012AMS	SampType: MS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: BH22-07 0'	Batch ID: 67737	RunNo: 88381								
Prep Date: 5/26/2022	Analysis Date: 5/31/2022	SeqNo: 3135370 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	54	10	50.00	0	108	36.1	154			
Surr: DNOP	3.4		5.000		67.5	51.1	141			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2205B74

07-Jun-22

Client: Vertex Resources Services, Inc.**Project:** Onyx 29 CTB1

Sample ID: 2205B74-012AMSD	SampType: MSD	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: BH22-07 0'	Batch ID: 67737	RunNo: 88381								
Prep Date: 5/26/2022	Analysis Date: 5/31/2022	SeqNo: 3135371	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	9.5	47.66	0	104	36.1	154	8.29	33.9	
Surr: DNOP	2.7		4.766		57.2	51.1	141	0	0	

Sample ID: LCS-67765	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 67765	RunNo: 88381								
Prep Date: 5/27/2022	Analysis Date: 5/31/2022	SeqNo: 3135454	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	92.9	64.4	127			
Surr: DNOP	2.7		5.000		53.2	51.1	141			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2205B74

07-Jun-22

Client: Vertex Resources Services, Inc.**Project:** Onyx 29 CTB1

Sample ID: mb-67730	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 67730		RunNo: 88348							
Prep Date: 5/26/2022	Analysis Date: 5/27/2022		SeqNo: 3133399		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		99.9	37.7	212			

Sample ID: lcs-67730	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: 67730		RunNo: 88348							
Prep Date: 5/26/2022	Analysis Date: 5/27/2022		SeqNo: 3133400		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	29	5.0	25.00	0	116	72.3	137			
Surr: BFB	2200		1000		219	37.7	212			S

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

Page 27 of 31

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2205B74

07-Jun-22

Client: Vertex Resources Services, Inc.**Project:** Onyx 29 CTB1

Sample ID: mb-67730	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 67730	RunNo: 88348								
Prep Date: 5/26/2022	Analysis Date: 5/27/2022	SeqNo: 3133452 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		103	70	130			

Sample ID: LCS-67730	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 67730	RunNo: 88348								
Prep Date: 5/26/2022	Analysis Date: 5/27/2022	SeqNo: 3133453 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.025	1.000	0	94.6	80	120			
Toluene	0.97	0.050	1.000	0	97.5	80	120			
Ethylbenzene	0.97	0.050	1.000	0	97.3	80	120			
Xylenes, Total	3.0	0.10	3.000	0	98.8	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		101	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2205B74

07-Jun-22

Client: Vertex Resources Services, Inc.**Project:** Onyx 29 CTB1

Sample ID: 2205b74-013ams	SampType: MS4	TestCode: EPA Method 8260B: Volatiles Short List								
Client ID: BH22-08 0'	Batch ID: 67732	RunNo: 88359								
Prep Date: 5/26/2022	Analysis Date: 5/27/2022	SeqNo: 3134178 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.024	0.9515	0	96.3	63.5	137			
Toluene	1.0	0.048	0.9515	0	106	77.6	127			
Ethylbenzene	1.0	0.048	0.9515	0	106	77.9	129			
Xylenes, Total	3.1	0.095	2.854	0	108	76.8	127			
Surr: 1,2-Dichloroethane-d4	0.47		0.4757		98.2	70	130			
Surr: 4-Bromofluorobenzene	0.47		0.4757		99.5	70	130			
Surr: Dibromofluoromethane	0.53		0.4757		111	70	130			
Surr: Toluene-d8	0.47		0.4757		98.9	70	130			

Sample ID: 2205b74-013amsd	SampType: MSD4	TestCode: EPA Method 8260B: Volatiles Short List								
Client ID: BH22-08 0'	Batch ID: 67732	RunNo: 88359								
Prep Date: 5/26/2022	Analysis Date: 5/27/2022	SeqNo: 3134179 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.024	0.9606	0	97.2	63.5	137	1.88	20	
Toluene	0.99	0.048	0.9606	0	103	77.6	127	1.50	20	
Ethylbenzene	1.0	0.048	0.9606	0	104	77.9	129	0.867	20	
Xylenes, Total	3.0	0.096	2.882	0	104	76.8	127	3.53	20	
Surr: 1,2-Dichloroethane-d4	0.51		0.4803		106	70	130	0	0	
Surr: 4-Bromofluorobenzene	0.48		0.4803		99.3	70	130	0	0	
Surr: Dibromofluoromethane	0.56		0.4803		117	70	130	0	0	
Surr: Toluene-d8	0.48		0.4803		99.4	70	130	0	0	

Sample ID: lcs-67732	SampType: LCS4	TestCode: EPA Method 8260B: Volatiles Short List								
Client ID: BatchQC	Batch ID: 67732	RunNo: 88359								
Prep Date: 5/26/2022	Analysis Date: 5/27/2022	SeqNo: 3134190 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.96	0.025	1.000	0	96.4	80	120			
Toluene	0.99	0.050	1.000	0	99.0	80	120			
Ethylbenzene	1.0	0.050	1.000	0	100	80	120			
Xylenes, Total	3.0	0.10	3.000	0	100	80	120			
Surr: 1,2-Dichloroethane-d4	0.52		0.5000		104	70	130			
Surr: 4-Bromofluorobenzene	0.48		0.5000		96.0	70	130			
Surr: Dibromofluoromethane	0.58		0.5000		116	70	130			
Surr: Toluene-d8	0.49		0.5000		97.8	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2205B74

07-Jun-22

Client: Vertex Resources Services, Inc.

Project: Onyx 29 CTB1

Sample ID: mb-67732	SampType: MBLK	TestCode: EPA Method 8260B: Volatiles Short List								
Client ID: PBS	Batch ID: 67732	RunNo: 88359								
Prep Date: 5/26/2022	Analysis Date: 5/27/2022	SeqNo: 3134191 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 1,2-Dichloroethane-d4	0.50		0.5000		99.6	70	130			
Surr: 4-Bromofluorobenzene	0.50		0.5000		101	70	130			
Surr: Dibromofluoromethane	0.57		0.5000		113	70	130			
Surr: Toluene-d8	0.50		0.5000		99.5	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Page 30 of 31

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2205B74

07-Jun-22

Client: Vertex Resources Services, Inc.**Project:** Onyx 29 CTB1

Sample ID: 2205b74-012ams	SampType: MS	TestCode: EPA Method 8015D Mod: Gasoline Range								
Client ID: BH22-07 0'	Batch ID: 67732	RunNo: 88359								
Prep Date: 5/26/2022	Analysis Date: 5/27/2022	SeqNo: 3134153 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	4.9	24.53	0	103	61.1	127			
Surr: BFB	490		490.7		101	70	130			

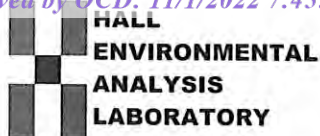
Sample ID: 2205b74-012amsd	SampType: MSD	TestCode: EPA Method 8015D Mod: Gasoline Range								
Client ID: BH22-07 0'	Batch ID: 67732	RunNo: 88359								
Prep Date: 5/26/2022	Analysis Date: 5/27/2022	SeqNo: 3134154 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	4.9	24.32	0	98.2	61.1	127	5.80	20	
Surr: BFB	500		486.4		103	70	130	0	0	

Sample ID: lcs-67732	SampType: LCS	TestCode: EPA Method 8015D Mod: Gasoline Range								
Client ID: LCSS	Batch ID: 67732	RunNo: 88359								
Prep Date: 5/26/2022	Analysis Date: 5/27/2022	SeqNo: 3134174 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	93.4	70	130			
Surr: BFB	520		500.0		105	70	130			

Sample ID: mb-67732	SampType: MBLK	TestCode: EPA Method 8015D Mod: Gasoline Range								
Client ID: PBS	Batch ID: 67732	RunNo: 88359								
Prep Date: 5/26/2022	Analysis Date: 5/27/2022	SeqNo: 3134175 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	550		500.0		111	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Vertex Resources
Services, Inc.

Work Order Number: 2205B74

RcptNo: 1

Received By: Tracy Casarrubias 5/26/2022 7:00:00 AM

Completed By: Tracy Casarrubias 5/26/2022 8:24:57 AM

Reviewed By: *[Signature]* 5-26-22

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. Received at least 1 vial with headspace $<1/4$ " for AQ VOA? Yes ☐ No ☐ NA ☒
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH:

(<2 or >12 unless noted)

Adjusted? _____

Checked by: *SC 5/26/22*

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.5	Good	Yes			
2	3.7	Good	Yes			
3	1.6	Good	Yes			
4	2.4	Good	Yes			



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 07, 2022

Monica Peppin

Vertex Resources Services, Inc.

3101 Boyd Drive

Carlsbad, NM 88220

TEL: (505) 506-0040

FAX

RE: Onyx 29 CTB1

OrderNo.: 2205B74

Dear Monica Peppin:

Hall Environmental Analysis Laboratory received 23 sample(s) on 5/26/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order 2205B74

Date Reported: 6/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-01 0'

Project: Onyx 29 CTB1

Collection Date: 5/24/2022 8:30:00 AM

Lab ID: 2205B74-001

Matrix: SOIL

Received Date: 5/26/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: ED
Diesel Range Organics (DRO)	20	9.6		mg/Kg	1	5/31/2022 3:47:57 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	5/31/2022 3:47:57 PM
Surr: DNOP	61.6	51.1-141		%Rec	1	5/31/2022 3:47:57 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	5/28/2022 2:22:02 AM
Surr: BFB	91.4	37.7-212		%Rec	1	5/28/2022 2:22:02 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	5/28/2022 2:22:02 AM
Toluene	ND	0.047		mg/Kg	1	5/28/2022 2:22:02 AM
Ethylbenzene	ND	0.047		mg/Kg	1	5/28/2022 2:22:02 AM
Xylenes, Total	ND	0.093		mg/Kg	1	5/28/2022 2:22:02 AM
Surr: 4-Bromofluorobenzene	93.8	70-130		%Rec	1	5/28/2022 2:22:02 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	61		mg/Kg	20	6/1/2022 10:34:46 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 1 of 31

Analytical Report

Lab Order 2205B74

Date Reported: 6/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-02 0'

Project: Onyx 29 CTB1

Collection Date: 5/24/2022 8:40:00 AM

Lab ID: 2205B74-002

Matrix: SOIL

Received Date: 5/26/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: ED
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	5/31/2022 4:11:53 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	5/31/2022 4:11:53 PM
Surr: DNOP	57.9	51.1-141		%Rec	1	5/31/2022 4:11:53 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	5/28/2022 3:32:52 AM
Surr: BFB	97.7	37.7-212		%Rec	1	5/28/2022 3:32:52 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	5/28/2022 3:32:52 AM
Toluene	ND	0.047		mg/Kg	1	5/28/2022 3:32:52 AM
Ethylbenzene	ND	0.047		mg/Kg	1	5/28/2022 3:32:52 AM
Xylenes, Total	ND	0.095		mg/Kg	1	5/28/2022 3:32:52 AM
Surr: 4-Bromofluorobenzene	98.0	70-130		%Rec	1	5/28/2022 3:32:52 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	5400	300		mg/Kg	100	6/2/2022 12:06:38 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 2 of 31

Analytical Report

Lab Order 2205B74

Date Reported: 6/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-02 2'

Project: Onyx 29 CTB1

Collection Date: 5/24/2022 8:45:00 AM

Lab ID: 2205B74-003

Matrix: SOIL

Received Date: 5/26/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: ED
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	5/31/2022 4:35:37 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	5/31/2022 4:35:37 PM
Surr: DNOP	64.1	51.1-141		%Rec	1	5/31/2022 4:35:37 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/28/2022 3:56:23 AM
Surr: BFB	96.6	37.7-212		%Rec	1	5/28/2022 3:56:23 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	5/28/2022 3:56:23 AM
Toluene	ND	0.049		mg/Kg	1	5/28/2022 3:56:23 AM
Ethylbenzene	ND	0.049		mg/Kg	1	5/28/2022 3:56:23 AM
Xylenes, Total	ND	0.098		mg/Kg	1	5/28/2022 3:56:23 AM
Surr: 4-Bromofluorobenzene	97.0	70-130		%Rec	1	5/28/2022 3:56:23 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	2700	150		mg/Kg	50	6/2/2022 12:19:03 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 3 of 31

Analytical Report

Lab Order 2205B74

Date Reported: 6/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-02 4'

Project: Onyx 29 CTB1

Collection Date: 5/24/2022 1:15:00 PM

Lab ID: 2205B74-004

Matrix: SOIL

Received Date: 5/26/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: ED
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	5/31/2022 4:59:23 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	5/31/2022 4:59:23 PM
Surr: DNOP	59.9	51.1-141		%Rec	1	5/31/2022 4:59:23 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	5/28/2022 4:20:05 AM
Surr: BFB	98.0	37.7-212		%Rec	1	5/28/2022 4:20:05 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	5/28/2022 4:20:05 AM
Toluene	ND	0.046		mg/Kg	1	5/28/2022 4:20:05 AM
Ethylbenzene	ND	0.046		mg/Kg	1	5/28/2022 4:20:05 AM
Xylenes, Total	ND	0.092		mg/Kg	1	5/28/2022 4:20:05 AM
Surr: 4-Bromofluorobenzene	97.1	70-130		%Rec	1	5/28/2022 4:20:05 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	260	61		mg/Kg	20	6/2/2022 12:01:38 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2205B74

Date Reported: 6/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-03 0'

Project: Onyx 29 CTB1

Collection Date: 5/24/2022 8:50:00 AM

Lab ID: 2205B74-005

Matrix: SOIL

Received Date: 5/26/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: ED
Diesel Range Organics (DRO)	4100	95		mg/Kg	10	6/1/2022 12:24:41 PM
Motor Oil Range Organics (MRO)	2400	470		mg/Kg	10	6/1/2022 12:24:41 PM
Surr: DNOP	0	51.1-141	S	%Rec	10	6/1/2022 12:24:41 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	5/28/2022 4:43:44 AM
Surr: BFB	93.4	37.7-212		%Rec	1	5/28/2022 4:43:44 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	5/28/2022 4:43:44 AM
Toluene	ND	0.047		mg/Kg	1	5/28/2022 4:43:44 AM
Ethylbenzene	ND	0.047		mg/Kg	1	5/28/2022 4:43:44 AM
Xylenes, Total	ND	0.094		mg/Kg	1	5/28/2022 4:43:44 AM
Surr: 4-Bromofluorobenzene	93.0	70-130		%Rec	1	5/28/2022 4:43:44 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	5500	150		mg/Kg	50	6/2/2022 12:31:27 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2205B74

Date Reported: 6/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-03 2'

Project: Onyx 29 CTB1

Collection Date: 5/24/2022 8:55:00 AM

Lab ID: 2205B74-006

Matrix: SOIL

Received Date: 5/26/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: ED
Diesel Range Organics (DRO)	240	9.6		mg/Kg	1	6/1/2022 1:12:26 PM
Motor Oil Range Organics (MRO)	140	48		mg/Kg	1	6/1/2022 1:12:26 PM
Surr: DNOP	93.2	51.1-141		%Rec	1	6/1/2022 1:12:26 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/28/2022 5:30:59 AM
Surr: BFB	96.0	37.7-212		%Rec	1	5/28/2022 5:30:59 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	5/28/2022 5:30:59 AM
Toluene	ND	0.049		mg/Kg	1	5/28/2022 5:30:59 AM
Ethylbenzene	ND	0.049		mg/Kg	1	5/28/2022 5:30:59 AM
Xylenes, Total	ND	0.099		mg/Kg	1	5/28/2022 5:30:59 AM
Surr: 4-Bromofluorobenzene	98.5	70-130		%Rec	1	5/28/2022 5:30:59 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	3700	150		mg/Kg	50	6/2/2022 1:08:39 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 6 of 31

Analytical Report

Lab Order 2205B74

Date Reported: 6/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-04 0'

Project: Onyx 29 CTB1

Collection Date: 5/24/2022 9:00:00 AM

Lab ID: 2205B74-007

Matrix: SOIL

Received Date: 5/26/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: ED
Diesel Range Organics (DRO)	12	9.0		mg/Kg	1	5/31/2022 6:11:58 PM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	5/31/2022 6:11:58 PM
Surr: DNOP	75.3	51.1-141		%Rec	1	5/31/2022 6:11:58 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/28/2022 5:54:36 AM
Surr: BFB	99.6	37.7-212		%Rec	1	5/28/2022 5:54:36 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	5/28/2022 5:54:36 AM
Toluene	ND	0.048		mg/Kg	1	5/28/2022 5:54:36 AM
Ethylbenzene	ND	0.048		mg/Kg	1	5/28/2022 5:54:36 AM
Xylenes, Total	ND	0.097		mg/Kg	1	5/28/2022 5:54:36 AM
Surr: 4-Bromofluorobenzene	95.7	70-130		%Rec	1	5/28/2022 5:54:36 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	98	60		mg/Kg	20	6/2/2022 12:38:51 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 7 of 31

Analytical Report

Lab Order 2205B74

Date Reported: 6/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-05 0'

Project: Onyx 29 CTB1

Collection Date: 5/24/2022 9:10:00 AM

Lab ID: 2205B74-008

Matrix: SOIL

Received Date: 5/26/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: ED
Diesel Range Organics (DRO)	29	9.4		mg/Kg	1	5/31/2022 6:36:29 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	5/31/2022 6:36:29 PM
Surr: DNOP	78.6	51.1-141		%Rec	1	5/31/2022 6:36:29 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	5/28/2022 6:18:19 AM
Surr: BFB	93.9	37.7-212		%Rec	1	5/28/2022 6:18:19 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	5/28/2022 6:18:19 AM
Toluene	ND	0.046		mg/Kg	1	5/28/2022 6:18:19 AM
Ethylbenzene	ND	0.046		mg/Kg	1	5/28/2022 6:18:19 AM
Xylenes, Total	ND	0.092		mg/Kg	1	5/28/2022 6:18:19 AM
Surr: 4-Bromofluorobenzene	95.2	70-130		%Rec	1	5/28/2022 6:18:19 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	73	60		mg/Kg	20	6/2/2022 12:51:17 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2205B74

Date Reported: 6/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-06 0'

Project: Onyx 29 CTB1

Collection Date: 5/24/2022 9:15:00 AM

Lab ID: 2205B74-009

Matrix: SOIL

Received Date: 5/26/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: ED
Diesel Range Organics (DRO)	17	10		mg/Kg	1	5/31/2022 7:00:53 PM
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	5/31/2022 7:00:53 PM
Surr: DNOP	71.5	51.1-141		%Rec	1	5/31/2022 7:00:53 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	5/28/2022 6:41:58 AM
Surr: BFB	94.5	37.7-212		%Rec	1	5/28/2022 6:41:58 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	5/28/2022 6:41:58 AM
Toluene	ND	0.047		mg/Kg	1	5/28/2022 6:41:58 AM
Ethylbenzene	ND	0.047		mg/Kg	1	5/28/2022 6:41:58 AM
Xylenes, Total	ND	0.093		mg/Kg	1	5/28/2022 6:41:58 AM
Surr: 4-Bromofluorobenzene	96.2	70-130		%Rec	1	5/28/2022 6:41:58 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	5000	150		mg/Kg	50	6/2/2022 1:21:03 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 9 of 31

Analytical Report

Lab Order 2205B74

Date Reported: 6/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-06 2'

Project: Onyx 29 CTB1

Collection Date: 5/24/2022 9:20:00 AM

Lab ID: 2205B74-010

Matrix: SOIL

Received Date: 5/26/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: ED
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	5/31/2022 7:25:13 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	5/31/2022 7:25:13 PM
Surr: DNOP	69.8	51.1-141		%Rec	1	5/31/2022 7:25:13 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/28/2022 7:05:38 AM
Surr: BFB	91.8	37.7-212		%Rec	1	5/28/2022 7:05:38 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	5/28/2022 7:05:38 AM
Toluene	ND	0.049		mg/Kg	1	5/28/2022 7:05:38 AM
Ethylbenzene	ND	0.049		mg/Kg	1	5/28/2022 7:05:38 AM
Xylenes, Total	ND	0.097		mg/Kg	1	5/28/2022 7:05:38 AM
Surr: 4-Bromofluorobenzene	96.5	70-130		%Rec	1	5/28/2022 7:05:38 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	4500	150		mg/Kg	50	6/2/2022 1:33:28 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2205B74

Date Reported: 6/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-06 6'

Project: Onyx 29 CTB1

Collection Date: 5/24/2022 1:45:00 PM

Lab ID: 2205B74-011

Matrix: SOIL

Received Date: 5/26/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: ED
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	5/31/2022 7:49:27 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	5/31/2022 7:49:27 PM
Surr: DNOP	71.5	51.1-141		%Rec	1	5/31/2022 7:49:27 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	5/28/2022 7:29:19 AM
Surr: BFB	92.6	37.7-212		%Rec	1	5/28/2022 7:29:19 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	5/28/2022 7:29:19 AM
Toluene	ND	0.046		mg/Kg	1	5/28/2022 7:29:19 AM
Ethylbenzene	ND	0.046		mg/Kg	1	5/28/2022 7:29:19 AM
Xylenes, Total	ND	0.092		mg/Kg	1	5/28/2022 7:29:19 AM
Surr: 4-Bromofluorobenzene	93.9	70-130		%Rec	1	5/28/2022 7:29:19 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	120	60		mg/Kg	20	6/2/2022 1:28:30 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2205B74

Date Reported: 6/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-07 0'

Project: Onyx 29 CTB1

Collection Date: 5/24/2022 10:20:00 AM

Lab ID: 2205B74-012

Matrix: SOIL

Received Date: 5/26/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	5/27/2022 1:09:32 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	5/27/2022 1:09:32 PM
Surr: DNOP	78.1	51.1-141		%Rec	1	5/27/2022 1:09:32 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	100	60		mg/Kg	20	6/2/2022 1:40:54 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.025		mg/Kg	1	5/27/2022 1:54:40 PM
Toluene	ND	0.050		mg/Kg	1	5/27/2022 1:54:40 PM
Ethylbenzene	ND	0.050		mg/Kg	1	5/27/2022 1:54:40 PM
Xylenes, Total	ND	0.10		mg/Kg	1	5/27/2022 1:54:40 PM
Surr: 1,2-Dichloroethane-d4	97.6	70-130		%Rec	1	5/27/2022 1:54:40 PM
Surr: 4-Bromofluorobenzene	94.3	70-130		%Rec	1	5/27/2022 1:54:40 PM
Surr: Dibromofluoromethane	111	70-130		%Rec	1	5/27/2022 1:54:40 PM
Surr: Toluene-d8	99.1	70-130		%Rec	1	5/27/2022 1:54:40 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/27/2022 1:54:40 PM
Surr: BFB	107	70-130		%Rec	1	5/27/2022 1:54:40 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2205B74

Date Reported: 6/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-08 0'

Project: Onyx 29 CTB1

Collection Date: 5/24/2022 9:25:00 AM

Lab ID: 2205B74-013

Matrix: SOIL

Received Date: 5/26/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	7100	94		mg/Kg	10	5/27/2022 7:21:06 PM
Motor Oil Range Organics (MRO)	4700	470		mg/Kg	10	5/27/2022 7:21:06 PM
Surr: DNOP	0	51.1-141	S	%Rec	10	5/27/2022 7:21:06 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	1300	61		mg/Kg	20	6/2/2022 2:18:07 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.024		mg/Kg	1	5/27/2022 3:20:57 PM
Toluene	ND	0.048		mg/Kg	1	5/27/2022 3:20:57 PM
Ethylbenzene	ND	0.048		mg/Kg	1	5/27/2022 3:20:57 PM
Xylenes, Total	ND	0.095		mg/Kg	1	5/27/2022 3:20:57 PM
Surr: 1,2-Dichloroethane-d4	97.7	70-130		%Rec	1	5/27/2022 3:20:57 PM
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	5/27/2022 3:20:57 PM
Surr: Dibromofluoromethane	114	70-130		%Rec	1	5/27/2022 3:20:57 PM
Surr: Toluene-d8	98.1	70-130		%Rec	1	5/27/2022 3:20:57 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/27/2022 3:20:57 PM
Surr: BFB	109	70-130		%Rec	1	5/27/2022 3:20:57 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2205B74

Date Reported: 6/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-08 2'

Project: Onyx 29 CTB1

Collection Date: 5/24/2022 9:30:00 AM

Lab ID: 2205B74-014

Matrix: SOIL

Received Date: 5/26/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	76	10		mg/Kg	1	5/27/2022 1:33:59 PM
Motor Oil Range Organics (MRO)	72	50		mg/Kg	1	5/27/2022 1:33:59 PM
Surr: DNOP	98.3	51.1-141		%Rec	1	5/27/2022 1:33:59 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	4700	150		mg/Kg	50	6/2/2022 1:45:52 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.024		mg/Kg	1	5/27/2022 4:47:23 PM
Toluene	ND	0.048		mg/Kg	1	5/27/2022 4:47:23 PM
Ethylbenzene	ND	0.048		mg/Kg	1	5/27/2022 4:47:23 PM
Xylenes, Total	ND	0.096		mg/Kg	1	5/27/2022 4:47:23 PM
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	1	5/27/2022 4:47:23 PM
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	5/27/2022 4:47:23 PM
Surr: Dibromofluoromethane	119	70-130		%Rec	1	5/27/2022 4:47:23 PM
Surr: Toluene-d8	96.9	70-130		%Rec	1	5/27/2022 4:47:23 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/27/2022 4:47:23 PM
Surr: BFB	107	70-130		%Rec	1	5/27/2022 4:47:23 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 14 of 31

Analytical Report

Lab Order 2205B74

Date Reported: 6/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-08 5'

Project: Onyx 29 CTB1

Collection Date: 5/24/2022 1:40:00 PM

Lab ID: 2205B74-015

Matrix: SOIL

Received Date: 5/26/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	120	9.4		mg/Kg	1	5/27/2022 1:58:24 PM
Motor Oil Range Organics (MRO)	120	47		mg/Kg	1	5/27/2022 1:58:24 PM
Surr: DNOP	104	51.1-141		%Rec	1	5/27/2022 1:58:24 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	720	60		mg/Kg	20	6/2/2022 2:42:57 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.025		mg/Kg	1	5/27/2022 5:16:12 PM
Toluene	ND	0.050		mg/Kg	1	5/27/2022 5:16:12 PM
Ethylbenzene	ND	0.050		mg/Kg	1	5/27/2022 5:16:12 PM
Xylenes, Total	ND	0.099		mg/Kg	1	5/27/2022 5:16:12 PM
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	5/27/2022 5:16:12 PM
Surr: 4-Bromofluorobenzene	97.9	70-130		%Rec	1	5/27/2022 5:16:12 PM
Surr: Dibromofluoromethane	122	70-130		%Rec	1	5/27/2022 5:16:12 PM
Surr: Toluene-d8	96.8	70-130		%Rec	1	5/27/2022 5:16:12 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/27/2022 5:16:12 PM
Surr: BFB	108	70-130		%Rec	1	5/27/2022 5:16:12 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2205B74

Date Reported: 6/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-09 0'

Project: Onyx 29 CTB1

Collection Date: 5/24/2022 9:35:00 AM

Lab ID: 2205B74-016

Matrix: SOIL

Received Date: 5/26/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	16	9.3		mg/Kg	1	5/31/2022 12:32:21 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	5/31/2022 12:32:21 PM
Surr: DNOP	82.5	51.1-141		%Rec	1	5/31/2022 12:32:21 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	370	60		mg/Kg	20	6/2/2022 2:55:22 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.024		mg/Kg	1	5/27/2022 5:45:01 PM
Toluene	ND	0.049		mg/Kg	1	5/27/2022 5:45:01 PM
Ethylbenzene	ND	0.049		mg/Kg	1	5/27/2022 5:45:01 PM
Xylenes, Total	ND	0.098		mg/Kg	1	5/27/2022 5:45:01 PM
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	5/27/2022 5:45:01 PM
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	5/27/2022 5:45:01 PM
Surr: Dibromofluoromethane	116	70-130		%Rec	1	5/27/2022 5:45:01 PM
Surr: Toluene-d8	98.6	70-130		%Rec	1	5/27/2022 5:45:01 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/27/2022 5:45:01 PM
Surr: BFB	109	70-130		%Rec	1	5/27/2022 5:45:01 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2205B74

Date Reported: 6/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-10 0'

Project: Onyx 29 CTB1

Collection Date: 5/24/2022 9:45:00 AM

Lab ID: 2205B74-017

Matrix: SOIL

Received Date: 5/26/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	390	9.7		mg/Kg	1	5/27/2022 2:22:47 PM
Motor Oil Range Organics (MRO)	370	48		mg/Kg	1	5/27/2022 2:22:47 PM
Surr: DNOP	104	51.1-141		%Rec	1	5/27/2022 2:22:47 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	20000	1500		mg/Kg	500	6/2/2022 1:58:16 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.024		mg/Kg	1	5/27/2022 6:13:46 PM
Toluene	ND	0.049		mg/Kg	1	5/27/2022 6:13:46 PM
Ethylbenzene	ND	0.049		mg/Kg	1	5/27/2022 6:13:46 PM
Xylenes, Total	ND	0.098		mg/Kg	1	5/27/2022 6:13:46 PM
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	1	5/27/2022 6:13:46 PM
Surr: 4-Bromofluorobenzene	96.7	70-130		%Rec	1	5/27/2022 6:13:46 PM
Surr: Dibromofluoromethane	115	70-130		%Rec	1	5/27/2022 6:13:46 PM
Surr: Toluene-d8	97.1	70-130		%Rec	1	5/27/2022 6:13:46 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/27/2022 6:13:46 PM
Surr: BFB	107	70-130		%Rec	1	5/27/2022 6:13:46 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2205B74

Date Reported: 6/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-10 2'

Project: Onyx 29 CTB1

Collection Date: 5/24/2022 9:50:00 AM

Lab ID: 2205B74-018

Matrix: SOIL

Received Date: 5/26/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: ED
Diesel Range Organics (DRO)	49	10		mg/Kg	1	5/31/2022 8:37:47 PM
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	5/31/2022 8:37:47 PM
Surr: DNOP	71.7	51.1-141		%Rec	1	5/31/2022 8:37:47 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	7200	300		mg/Kg	100	6/2/2022 2:10:40 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.024		mg/Kg	1	5/27/2022 6:42:26 PM
Toluene	ND	0.048		mg/Kg	1	5/27/2022 6:42:26 PM
Ethylbenzene	ND	0.048		mg/Kg	1	5/27/2022 6:42:26 PM
Xylenes, Total	ND	0.097		mg/Kg	1	5/27/2022 6:42:26 PM
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	5/27/2022 6:42:26 PM
Surr: 4-Bromofluorobenzene	98.9	70-130		%Rec	1	5/27/2022 6:42:26 PM
Surr: Dibromofluoromethane	116	70-130		%Rec	1	5/27/2022 6:42:26 PM
Surr: Toluene-d8	98.6	70-130		%Rec	1	5/27/2022 6:42:26 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/27/2022 6:42:26 PM
Surr: BFB	109	70-130		%Rec	1	5/27/2022 6:42:26 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 18 of 31

Analytical Report

Lab Order 2205B74

Date Reported: 6/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-10 3'

Project: Onyx 29 CTB1

Collection Date: 5/24/2022 1:10:00 PM

Lab ID: 2205B74-019

Matrix: SOIL

Received Date: 5/26/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	5/27/2022 3:11:44 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	5/27/2022 3:11:44 PM
Surr: DNOP	58.5	51.1-141		%Rec	1	5/27/2022 3:11:44 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	430	60		mg/Kg	20	6/2/2022 3:32:36 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.024		mg/Kg	1	5/27/2022 7:11:06 PM
Toluene	ND	0.047		mg/Kg	1	5/27/2022 7:11:06 PM
Ethylbenzene	ND	0.047		mg/Kg	1	5/27/2022 7:11:06 PM
Xylenes, Total	ND	0.094		mg/Kg	1	5/27/2022 7:11:06 PM
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	5/27/2022 7:11:06 PM
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	5/27/2022 7:11:06 PM
Surr: Dibromofluoromethane	115	70-130		%Rec	1	5/27/2022 7:11:06 PM
Surr: Toluene-d8	99.5	70-130		%Rec	1	5/27/2022 7:11:06 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	5/27/2022 7:11:06 PM
Surr: BFB	109	70-130		%Rec	1	5/27/2022 7:11:06 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2205B74

Date Reported: 6/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-11 0'

Project: Onyx 29 CTB1

Collection Date: 5/24/2022 9:55:00 AM

Lab ID: 2205B74-020

Matrix: SOIL

Received Date: 5/26/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	5/27/2022 3:36:12 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	5/27/2022 3:36:12 PM
Surr: DNOP	51.5	51.1-141		%Rec	1	5/27/2022 3:36:12 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	230	60		mg/Kg	20	6/1/2022 5:14:13 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.024		mg/Kg	1	5/27/2022 7:39:44 PM
Toluene	ND	0.048		mg/Kg	1	5/27/2022 7:39:44 PM
Ethylbenzene	ND	0.048		mg/Kg	1	5/27/2022 7:39:44 PM
Xylenes, Total	ND	0.097		mg/Kg	1	5/27/2022 7:39:44 PM
Surr: 1,2-Dichloroethane-d4	96.3	70-130		%Rec	1	5/27/2022 7:39:44 PM
Surr: 4-Bromofluorobenzene	96.2	70-130		%Rec	1	5/27/2022 7:39:44 PM
Surr: Dibromofluoromethane	114	70-130		%Rec	1	5/27/2022 7:39:44 PM
Surr: Toluene-d8	100	70-130		%Rec	1	5/27/2022 7:39:44 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/27/2022 7:39:44 PM
Surr: BFB	108	70-130		%Rec	1	5/27/2022 7:39:44 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 20 of 31

Analytical Report

Lab Order 2205B74

Date Reported: 6/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-12 0'

Project: Onyx 29 CTB1

Collection Date: 5/24/2022 10:05:00 AM

Lab ID: 2205B74-021

Matrix: SOIL

Received Date: 5/26/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	5/27/2022 4:00:38 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	5/27/2022 4:00:38 PM
Surr: DNOP	59.9	51.1-141		%Rec	1	5/27/2022 4:00:38 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	17000	600		mg/Kg	200	6/2/2022 10:39:49 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.025		mg/Kg	1	5/27/2022 8:08:26 PM
Toluene	ND	0.049		mg/Kg	1	5/27/2022 8:08:26 PM
Ethylbenzene	ND	0.049		mg/Kg	1	5/27/2022 8:08:26 PM
Xylenes, Total	ND	0.099		mg/Kg	1	5/27/2022 8:08:26 PM
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	5/27/2022 8:08:26 PM
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	1	5/27/2022 8:08:26 PM
Surr: Dibromofluoromethane	113	70-130		%Rec	1	5/27/2022 8:08:26 PM
Surr: Toluene-d8	101	70-130		%Rec	1	5/27/2022 8:08:26 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/27/2022 8:08:26 PM
Surr: BFB	113	70-130		%Rec	1	5/27/2022 8:08:26 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2205B74

Date Reported: 6/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-12 2'

Project: Onyx 29 CTB1

Collection Date: 5/24/2022 10:10:00 AM

Lab ID: 2205B74-022

Matrix: SOIL

Received Date: 5/26/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: ED
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	5/31/2022 9:01:57 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	5/31/2022 9:01:57 PM
Surr: DNOP	58.7	51.1-141		%Rec	1	5/31/2022 9:01:57 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	230	60		mg/Kg	20	6/1/2022 6:03:37 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.025		mg/Kg	1	5/27/2022 8:37:02 PM
Toluene	ND	0.049		mg/Kg	1	5/27/2022 8:37:02 PM
Ethylbenzene	ND	0.049		mg/Kg	1	5/27/2022 8:37:02 PM
Xylenes, Total	ND	0.099		mg/Kg	1	5/27/2022 8:37:02 PM
Surr: 1,2-Dichloroethane-d4	104	70-130		%Rec	1	5/27/2022 8:37:02 PM
Surr: 4-Bromofluorobenzene	98.0	70-130		%Rec	1	5/27/2022 8:37:02 PM
Surr: Dibromofluoromethane	114	70-130		%Rec	1	5/27/2022 8:37:02 PM
Surr: Toluene-d8	100	70-130		%Rec	1	5/27/2022 8:37:02 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/27/2022 8:37:02 PM
Surr: BFB	107	70-130		%Rec	1	5/27/2022 8:37:02 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 22 of 31

Analytical Report

Lab Order 2205B74

Date Reported: 6/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-03 5'

Project: Onyx 29 CTB1

Collection Date: 5/24/2022 1:35:00 PM

Lab ID: 2205B74-023

Matrix: SOIL

Received Date: 5/26/2022 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	480	9.9		mg/Kg	1	5/27/2022 4:49:38 PM
Motor Oil Range Organics (MRO)	460	49		mg/Kg	1	5/27/2022 4:49:38 PM
Surr: DNOP	113	51.1-141		%Rec	1	5/27/2022 4:49:38 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	640	60		mg/Kg	20	6/1/2022 6:15:57 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: JR
Benzene	ND	0.024		mg/Kg	1	5/27/2022 9:05:34 PM
Toluene	ND	0.049		mg/Kg	1	5/27/2022 9:05:34 PM
Ethylbenzene	ND	0.049		mg/Kg	1	5/27/2022 9:05:34 PM
Xylenes, Total	ND	0.098		mg/Kg	1	5/27/2022 9:05:34 PM
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	5/27/2022 9:05:34 PM
Surr: 4-Bromofluorobenzene	95.1	70-130		%Rec	1	5/27/2022 9:05:34 PM
Surr: Dibromofluoromethane	111	70-130		%Rec	1	5/27/2022 9:05:34 PM
Surr: Toluene-d8	97.1	70-130		%Rec	1	5/27/2022 9:05:34 PM
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: JR
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/27/2022 9:05:34 PM
Surr: BFB	105	70-130		%Rec	1	5/27/2022 9:05:34 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 23 of 31

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2205B74

08-Jun-22

Client: Vertex Resources Services, Inc.**Project:** Onyx 29 CTB1

Sample ID: MB-67840	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 67840	RunNo: 88422								
Prep Date: 6/1/2022	Analysis Date: 6/1/2022	SeqNo: 3137024 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-67840	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 67840	RunNo: 88422								
Prep Date: 6/1/2022	Analysis Date: 6/1/2022	SeqNo: 3137025 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.6	90	110			

Sample ID: MB-67832	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 67832	RunNo: 88432								
Prep Date: 6/1/2022	Analysis Date: 6/1/2022	SeqNo: 3137379 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-67832	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 67832	RunNo: 88432								
Prep Date: 6/1/2022	Analysis Date: 6/1/2022	SeqNo: 3137380 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.2	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2205B74

08-Jun-22

Client: Vertex Resources Services, Inc.**Project:** Onyx 29 CTB1

Sample ID: LCS-67737	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 67737	RunNo: 88332								
Prep Date: 5/26/2022	Analysis Date: 5/27/2022	SeqNo: 3132996 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	40	10	50.00	0	80.3	64.4	127			
Surr: DNOP	4.1		5.000		81.2	51.1	141			

Sample ID: MB-67737	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 67737	RunNo: 88332								
Prep Date: 5/26/2022	Analysis Date: 5/27/2022	SeqNo: 3132997 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.2		10.00		92.1	51.1	141			

Sample ID: 2205B74-012AMSD	SampType: MSD	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: BH22-07 0'	Batch ID: 67737	RunNo: 88332								
Prep Date: 5/26/2022	Analysis Date: 5/27/2022	SeqNo: 3134548 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	39	9.5	47.66	0	82.1	36.1	154	11.6	33.9	
Surr: DNOP	1.0		4.766		21.5	51.1	141	0	0	S

Sample ID: MB-67765	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 67765	RunNo: 88381								
Prep Date: 5/27/2022	Analysis Date: 5/31/2022	SeqNo: 3135345 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	6.8		10.00		68.2	51.1	141			

Sample ID: 2205B74-012AMS	SampType: MS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: BH22-07 0'	Batch ID: 67737	RunNo: 88381								
Prep Date: 5/26/2022	Analysis Date: 5/31/2022	SeqNo: 3135370 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	54	10	50.00	0	108	36.1	154			
Surr: DNOP	3.4		5.000		67.5	51.1	141			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2205B74

08-Jun-22

Client: Vertex Resources Services, Inc.**Project:** Onyx 29 CTB1

Sample ID: 2205B74-012AMSD	SampType: MSD	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: BH22-07 0'	Batch ID: 67737	RunNo: 88381								
Prep Date: 5/26/2022	Analysis Date: 5/31/2022	SeqNo: 3135371 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	9.5	47.66	0	104	36.1	154	8.29	33.9	
Surr: DNOP	2.7		4.766		57.2	51.1	141	0	0	

Sample ID: LCS-67765	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 67765	RunNo: 88381								
Prep Date: 5/27/2022	Analysis Date: 5/31/2022	SeqNo: 3135454 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	92.9	64.4	127			
Surr: DNOP	2.7		5.000		53.2	51.1	141			

Sample ID: MB-67821	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 67821	RunNo: 88418								
Prep Date: 6/1/2022	Analysis Date: 6/3/2022	SeqNo: 3138396 Units: %Rec								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.0		10.00		90.0	51.1	141			

Sample ID: LCS-67821	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 67821	RunNo: 88418								
Prep Date: 6/1/2022	Analysis Date: 6/3/2022	SeqNo: 3138397 Units: %Rec								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	3.8		5.000		76.1	51.1	141			

Sample ID: MB-67871	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 67871	RunNo: 88418								
Prep Date: 6/2/2022	Analysis Date: 6/4/2022	SeqNo: 3140066 Units: %Rec								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.7		10.00		96.6	51.1	141			

Sample ID: LCS-67871	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 67871	RunNo: 88418								
Prep Date: 6/2/2022	Analysis Date: 6/4/2022	SeqNo: 3140074 Units: %Rec								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.9		5.000		98.0	51.1	141			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Estimated value
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
PQL Practical Quantitative Limit	RL Reporting Limit
S % Recovery outside of range due to dilution or matrix interference	

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2205B74

08-Jun-22

Client: Vertex Resources Services, Inc.**Project:** Onyx 29 CTB1

Sample ID: mb-67730	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 67730	RunNo: 88348								
Prep Date: 5/26/2022	Analysis Date: 5/27/2022	SeqNo: 3133399 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		99.9	37.7	212			

Sample ID: lcs-67730	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 67730	RunNo: 88348								
Prep Date: 5/26/2022	Analysis Date: 5/27/2022	SeqNo: 3133400 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	29	5.0	25.00	0	116	72.3	137			
Surr: BFB	2200		1000		219	37.7	212			S

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2205B74

08-Jun-22

Client: Vertex Resources Services, Inc.**Project:** Onyx 29 CTB1

Sample ID: mb-67730	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 67730	RunNo: 88348								
Prep Date: 5/26/2022	Analysis Date: 5/27/2022	SeqNo: 3133452	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		103	70	130			

Sample ID: LCS-67730	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 67730	RunNo: 88348								
Prep Date: 5/26/2022	Analysis Date: 5/27/2022	SeqNo: 3133453	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.025	1.000	0	94.6	80	120			
Toluene	0.97	0.050	1.000	0	97.5	80	120			
Ethylbenzene	0.97	0.050	1.000	0	97.3	80	120			
Xylenes, Total	3.0	0.10	3.000	0	98.8	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		101	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2205B74

08-Jun-22

Client: Vertex Resources Services, Inc.**Project:** Onyx 29 CTB1

Sample ID: 2205b74-013ams		SampType: MS4		TestCode: EPA Method 8260B: Volatiles Short List						
Client ID: BH22-08 0'		Batch ID: 67732		RunNo: 88359						
Prep Date: 5/26/2022		Analysis Date: 5/27/2022		SeqNo: 3134178		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.024	0.9515	0	96.3	63.5	137			
Toluene	1.0	0.048	0.9515	0	106	77.6	127			
Ethylbenzene	1.0	0.048	0.9515	0	106	77.9	129			
Xylenes, Total	3.1	0.095	2.854	0	108	76.8	127			
Surr: 1,2-Dichloroethane-d4	0.47		0.4757		98.2	70	130			
Surr: 4-Bromofluorobenzene	0.47		0.4757		99.5	70	130			
Surr: Dibromofluoromethane	0.53		0.4757		111	70	130			
Surr: Toluene-d8	0.47		0.4757		98.9	70	130			

Sample ID: 2205b74-013amsd		SampType: MSD4		TestCode: EPA Method 8260B: Volatiles Short List						
Client ID: BH22-08 0'		Batch ID: 67732		RunNo: 88359						
Prep Date: 5/26/2022		Analysis Date: 5/27/2022		SeqNo: 3134179		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.024	0.9606	0	97.2	63.5	137	1.88	20	
Toluene	0.99	0.048	0.9606	0	103	77.6	127	1.50	20	
Ethylbenzene	1.0	0.048	0.9606	0	104	77.9	129	0.867	20	
Xylenes, Total	3.0	0.096	2.882	0	104	76.8	127	3.53	20	
Surr: 1,2-Dichloroethane-d4	0.51		0.4803		106	70	130	0	0	
Surr: 4-Bromofluorobenzene	0.48		0.4803		99.3	70	130	0	0	
Surr: Dibromofluoromethane	0.56		0.4803		117	70	130	0	0	
Surr: Toluene-d8	0.48		0.4803		99.4	70	130	0	0	

Sample ID: lcs-67732		SampType: LCS4		TestCode: EPA Method 8260B: Volatiles Short List						
Client ID: BatchQC		Batch ID: 67732		RunNo: 88359						
Prep Date: 5/26/2022		Analysis Date: 5/27/2022		SeqNo: 3134190		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.96	0.025	1.000	0	96.4	80	120			
Toluene	0.99	0.050	1.000	0	99.0	80	120			
Ethylbenzene	1.0	0.050	1.000	0	100	80	120			
Xylenes, Total	3.0	0.10	3.000	0	100	80	120			
Surr: 1,2-Dichloroethane-d4	0.52		0.5000		104	70	130			
Surr: 4-Bromofluorobenzene	0.48		0.5000		96.0	70	130			
Surr: Dibromofluoromethane	0.58		0.5000		116	70	130			
Surr: Toluene-d8	0.49		0.5000		97.8	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2205B74

08-Jun-22

Client: Vertex Resources Services, Inc.**Project:** Onyx 29 CTB1

Sample ID: mb-67732	SampType: MBLK			TestCode: EPA Method 8260B: Volatiles Short List						
Client ID: PBS	Batch ID: 67732			RunNo: 88359						
Prep Date: 5/26/2022	Analysis Date: 5/27/2022			SeqNo: 3134191		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 1,2-Dichloroethane-d4	0.50		0.5000		99.6	70	130			
Surr: 4-Bromofluorobenzene	0.50		0.5000		101	70	130			
Surr: Dibromofluoromethane	0.57		0.5000		113	70	130			
Surr: Toluene-d8	0.50		0.5000		99.5	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2205B74

08-Jun-22

Client: Vertex Resources Services, Inc.**Project:** Onyx 29 CTB1

Sample ID: 2205b74-012ams	SampType: MS	TestCode: EPA Method 8015D Mod: Gasoline Range								
Client ID: BH22-07 0'	Batch ID: 67732	RunNo: 88359								
Prep Date: 5/26/2022	Analysis Date: 5/27/2022	SeqNo: 3134153 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	4.9	24.53	0	103	61.1	127			
Surr: BFB	490		490.7		101	70	130			

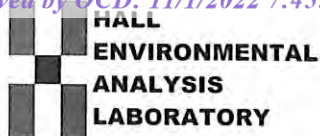
Sample ID: 2205b74-012amsd	SampType: MSD	TestCode: EPA Method 8015D Mod: Gasoline Range								
Client ID: BH22-07 0'	Batch ID: 67732	RunNo: 88359								
Prep Date: 5/26/2022	Analysis Date: 5/27/2022	SeqNo: 3134154 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	4.9	24.32	0	98.2	61.1	127	5.80	20	
Surr: BFB	500		486.4		103	70	130	0	0	

Sample ID: lcs-67732	SampType: LCS	TestCode: EPA Method 8015D Mod: Gasoline Range								
Client ID: LCSS	Batch ID: 67732	RunNo: 88359								
Prep Date: 5/26/2022	Analysis Date: 5/27/2022	SeqNo: 3134174 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	93.4	70	130			
Surr: BFB	520		500.0		105	70	130			

Sample ID: mb-67732	SampType: MBLK	TestCode: EPA Method 8015D Mod: Gasoline Range								
Client ID: PBS	Batch ID: 67732	RunNo: 88359								
Prep Date: 5/26/2022	Analysis Date: 5/27/2022	SeqNo: 3134175 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	550		500.0		111	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Vertex Resources
Services, Inc.

Work Order Number: 2205B74

RcptNo: 1

Received By: Tracy Casarrubias 5/26/2022 7:00:00 AM

Completed By: Tracy Casarrubias 5/26/2022 8:24:57 AM

Reviewed By: *[Signature]* 5-26-22

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. Received at least 1 vial with headspace $<1/4$ " for AQ VOA? Yes ☐ No ☐ NA ☒
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH:

(<2 or >12 unless noted)

Adjusted? _____

Checked by: *SC 5/26/22*

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.5	Good	Yes			
2	3.7	Good	Yes			
3	1.6	Good	Yes			
4	2.4	Good	Yes			



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 08, 2022

Monica Peppin

Vertex Resources Services, Inc.

3101 Boyd Drive

Carlsbad, NM 88220

TEL: (505) 506-0040

FAX:

RE: Onyx 29 CTB 1

OrderNo.: 2205C48

Dear Monica Peppin:

Hall Environmental Analysis Laboratory received 6 sample(s) on 5/27/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman".

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order 2205C48

Date Reported: 6/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-13 0'

Project: Onyx 29 CTB 1

Collection Date: 5/25/2022 9:10:00 AM

Lab ID: 2205C48-001

Matrix: SOIL

Received Date: 5/27/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	31	9.6		mg/Kg	1	6/1/2022 2:59:50 PM
Motor Oil Range Organics (MRO)	52	48		mg/Kg	1	6/1/2022 2:59:50 PM
Surr: DNOP	89.5	51.1-141		%Rec	1	6/1/2022 2:59:50 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/30/2022 3:13:00 AM
Surr: BFB	82.9	37.7-212		%Rec	1	5/30/2022 3:13:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Benzene	ND	0.024		mg/Kg	1	5/30/2022 3:13:00 AM
Toluene	ND	0.049		mg/Kg	1	5/30/2022 3:13:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	5/30/2022 3:13:00 AM
Xylenes, Total	ND	0.097		mg/Kg	1	5/30/2022 3:13:00 AM
Surr: 4-Bromofluorobenzene	85.1	70-130		%Rec	1	5/30/2022 3:13:00 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	250	60		mg/Kg	20	6/2/2022 3:44:01 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2205C48

Date Reported: 6/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-13 2'

Project: Onyx 29 CTB 1

Collection Date: 5/25/2022 9:15:00 AM

Lab ID: 2205C48-002

Matrix: SOIL

Received Date: 5/27/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	6/1/2022 3:10:46 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/1/2022 3:10:46 PM
Surr: DNOP	90.3	51.1-141		%Rec	1	6/1/2022 3:10:46 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/30/2022 5:11:00 AM
Surr: BFB	87.3	37.7-212		%Rec	1	5/30/2022 5:11:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Benzene	ND	0.025		mg/Kg	1	5/30/2022 5:11:00 AM
Toluene	ND	0.049		mg/Kg	1	5/30/2022 5:11:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	5/30/2022 5:11:00 AM
Xylenes, Total	ND	0.098		mg/Kg	1	5/30/2022 5:11:00 AM
Surr: 4-Bromofluorobenzene	85.5	70-130		%Rec	1	5/30/2022 5:11:00 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	250	60		mg/Kg	20	6/2/2022 3:56:22 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2205C48

Date Reported: 6/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-14 0'

Project: Onyx 29 CTB 1

Collection Date: 5/25/2022 9:20:00 AM

Lab ID: 2205C48-003

Matrix: SOIL

Received Date: 5/27/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: ED
Diesel Range Organics (DRO)	23	9.2		mg/Kg	1	6/1/2022 11:41:18 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	6/1/2022 11:41:18 PM
Surr: DNOP	68.6	51.1-141		%Rec	1	6/1/2022 11:41:18 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/30/2022 5:31:00 AM
Surr: BFB	83.7	37.7-212		%Rec	1	5/30/2022 5:31:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Benzene	ND	0.024		mg/Kg	1	5/30/2022 5:31:00 AM
Toluene	ND	0.048		mg/Kg	1	5/30/2022 5:31:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	5/30/2022 5:31:00 AM
Xylenes, Total	ND	0.097		mg/Kg	1	5/30/2022 5:31:00 AM
Surr: 4-Bromofluorobenzene	84.2	70-130		%Rec	1	5/30/2022 5:31:00 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	70	60		mg/Kg	20	6/2/2022 4:08:43 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2205C48

Date Reported: 6/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-15 0'

Project: Onyx 29 CTB 1

Collection Date: 5/25/2022 9:30:00 AM

Lab ID: 2205C48-004

Matrix: SOIL

Received Date: 5/27/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: ED
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	6/2/2022 9:57:17 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	6/2/2022 9:57:17 PM
Surr: DNOP	98.4	51.1-141		%Rec	1	6/2/2022 9:57:17 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/30/2022 6:30:00 AM
Surr: BFB	87.3	37.7-212		%Rec	1	5/30/2022 6:30:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Benzene	ND	0.024		mg/Kg	1	5/30/2022 6:30:00 AM
Toluene	ND	0.049		mg/Kg	1	5/30/2022 6:30:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	5/30/2022 6:30:00 AM
Xylenes, Total	ND	0.098		mg/Kg	1	5/30/2022 6:30:00 AM
Surr: 4-Bromofluorobenzene	89.1	70-130		%Rec	1	5/30/2022 6:30:00 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	120	60		mg/Kg	20	6/2/2022 4:45:44 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2205C48

Date Reported: 6/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-16 0'

Project: Onyx 29 CTB 1

Collection Date: 5/25/2022 9:40:00 AM

Lab ID: 2205C48-005

Matrix: SOIL

Received Date: 5/27/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: ED
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	6/2/2022 10:21:44 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/2/2022 10:21:44 PM
Surr: DNOP	91.8	51.1-141		%Rec	1	6/2/2022 10:21:44 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/30/2022 7:29:00 AM
Surr: BFB	88.2	37.7-212		%Rec	1	5/30/2022 7:29:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Benzene	ND	0.024		mg/Kg	1	5/30/2022 7:29:00 AM
Toluene	ND	0.049		mg/Kg	1	5/30/2022 7:29:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	5/30/2022 7:29:00 AM
Xylenes, Total	ND	0.098		mg/Kg	1	5/30/2022 7:29:00 AM
Surr: 4-Bromofluorobenzene	88.6	70-130		%Rec	1	5/30/2022 7:29:00 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	6/2/2022 4:58:06 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2205C48

Date Reported: 6/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BH22-17 0'

Project: Onyx 29 CTB 1

Collection Date: 5/25/2022 9:50:00 AM

Lab ID: 2205C48-006

Matrix: SOIL

Received Date: 5/27/2022 7:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: ED
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	6/2/2022 10:46:19 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/2/2022 10:46:19 PM
Surr: DNOP	96.5	51.1-141		%Rec	1	6/2/2022 10:46:19 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	5/30/2022 7:49:00 AM
Surr: BFB	85.8	37.7-212		%Rec	1	5/30/2022 7:49:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: RAA
Benzene	ND	0.024		mg/Kg	1	5/30/2022 7:49:00 AM
Toluene	ND	0.047		mg/Kg	1	5/30/2022 7:49:00 AM
Ethylbenzene	ND	0.047		mg/Kg	1	5/30/2022 7:49:00 AM
Xylenes, Total	ND	0.094		mg/Kg	1	5/30/2022 7:49:00 AM
Surr: 4-Bromofluorobenzene	86.6	70-130		%Rec	1	5/30/2022 7:49:00 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	6/2/2022 12:36:26 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2205C48

08-Jun-22

Client: Vertex Resources Services, Inc.**Project:** Onyx 29 CTB 1

Sample ID: MB-67841	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 67841	RunNo: 88422								
Prep Date: 6/1/2022	Analysis Date: 6/1/2022	SeqNo: 3137026 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-67841	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 67841	RunNo: 88422								
Prep Date: 6/1/2022	Analysis Date: 6/1/2022	SeqNo: 3137027 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.3	90	110			

Sample ID: MB-67859	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 67859	RunNo: 88449								
Prep Date: 6/2/2022	Analysis Date: 6/2/2022	SeqNo: 3138016 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-67859	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 67859	RunNo: 88449								
Prep Date: 6/2/2022	Analysis Date: 6/2/2022	SeqNo: 3138017 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.4	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2205C48

08-Jun-22

Client: Vertex Resources Services, Inc.**Project:** Onyx 29 CTB 1

Sample ID: LCS-67800	SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: LCSS	Batch ID: 67800		RunNo: 88383							
Prep Date: 5/31/2022	Analysis Date: 6/1/2022		SeqNo: 3135520		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51	10	50.00	0	102	64.4	127			
Surr: DNOP	4.0		5.000		79.2	51.1	141			

Sample ID: MB-67800	SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: PBS	Batch ID: 67800		RunNo: 88383							
Prep Date: 5/31/2022	Analysis Date: 6/1/2022		SeqNo: 3135522		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	10		10.00		99.5	51.1	141			

Sample ID: MB-67801	SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: PBS	Batch ID: 67801		RunNo: 88418							
Prep Date: 5/31/2022	Analysis Date: 6/1/2022		SeqNo: 3136937		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	6.7		10.00		67.1	51.1	141			

Sample ID: LCS-67801	SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: LCSS	Batch ID: 67801		RunNo: 88418							
Prep Date: 5/31/2022	Analysis Date: 6/2/2022		SeqNo: 3137868		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	53	10	50.00	0	107	64.4	127			
Surr: DNOP	4.8		5.000		95.3	51.1	141			

Sample ID: 2205C48-003AMS	SampType: MS		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: BH22-14 0'	Batch ID: 67801		RunNo: 88418							
Prep Date: 5/31/2022	Analysis Date: 6/2/2022		SeqNo: 3138107		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	57	9.7	48.36	23.39	68.9	36.1	154			
Surr: DNOP	3.0		4.836		62.0	51.1	141			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2205C48

08-Jun-22

Client: Vertex Resources Services, Inc.**Project:** Onyx 29 CTB 1

Sample ID: 2205C48-003AMSD	SampType: MSD	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: BH22-14 0'	Batch ID: 67801	RunNo: 88418								
Prep Date: 5/31/2022	Analysis Date: 6/2/2022	SeqNo: 3138108	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	76	10	49.80	23.39	106	36.1	154	29.4	33.9	
Surr: DNOP	4.8		4.980		96.0	51.1	141	0	0	

Sample ID: MB-67871	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 67871	RunNo: 88418								
Prep Date: 6/2/2022	Analysis Date: 6/4/2022	SeqNo: 3140066	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.7		10.00		96.6	51.1	141			

Sample ID: LCS-67871	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 67871	RunNo: 88418								
Prep Date: 6/2/2022	Analysis Date: 6/4/2022	SeqNo: 3140074	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.9		5.000		98.0	51.1	141			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2205C48

08-Jun-22

Client: Vertex Resources Services, Inc.**Project:** Onyx 29 CTB 1

Sample ID: ics-67761	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: 67761		RunNo: 88358							
Prep Date: 5/27/2022	Analysis Date: 5/29/2022		SeqNo: 3134017		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	94.6	72.3	137			
Surr: BFB	1900		1000		186	37.7	212			

Sample ID: mb-67761	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 67761		RunNo: 88358							
Prep Date: 5/27/2022	Analysis Date: 5/29/2022		SeqNo: 3134018		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	870		1000		87.1	37.7	212			

Sample ID: ics-67768	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: 67768		RunNo: 88358							
Prep Date: 5/27/2022	Analysis Date: 5/30/2022		SeqNo: 3134041		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	93.9	72.3	137			
Surr: BFB	1900		1000		190	37.7	212			

Sample ID: mb-67768	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 67768		RunNo: 88358							
Prep Date: 5/27/2022	Analysis Date: 5/30/2022		SeqNo: 3134042		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	870		1000		86.6	37.7	212			

Sample ID: 2205c48-003ams	SampType: MS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: BH22-14 0'	Batch ID: 67768		RunNo: 88358							
Prep Date: 5/27/2022	Analysis Date: 5/30/2022		SeqNo: 3134045		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	4.8	24.08	0	94.6	70	130			
Surr: BFB	1800		963.4		191	37.7	212			

Sample ID: 2205c48-003amsd	SampType: MSD		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: BH22-14 0'	Batch ID: 67768		RunNo: 88358							
Prep Date: 5/27/2022	Analysis Date: 5/30/2022		SeqNo: 3134046		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2205C4808-Jun-22

Client: Vertex Resources Services, Inc.
Project: Onyx 29 CTB 1

Sample ID: 2205c48-003amsd		SampType: MSD		TestCode: EPA Method 8015D: Gasoline Range						
Client ID: BH22-14 0'		Batch ID: 67768		RunNo: 88358						
Prep Date: 5/27/2022		Analysis Date: 5/30/2022		SeqNo: 3134046		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	4.8	24.04	0	92.7	70	130	2.20	20	
Surr: BFB	1800		961.5		189	37.7	212	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2205C48

08-Jun-22

Client: Vertex Resources Services, Inc.**Project:** Onyx 29 CTB 1

Sample ID: lcs-67761	SampType: LCS			TestCode: EPA Method 8021B: Volatiles						
Client ID: LCSS	Batch ID: 67761			RunNo: 88358						
Prep Date: 5/27/2022	Analysis Date: 5/29/2022			SeqNo: 3134079		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.96	0.025	1.000	0	96.4	80	120			
Toluene	0.97	0.050	1.000	0	97.3	80	120			
Ethylbenzene	0.95	0.050	1.000	0	95.0	80	120			
Xylenes, Total	2.8	0.10	3.000	0	94.4	80	120			
Surr: 4-Bromofluorobenzene	0.86		1.000		86.0	70	130			

Sample ID: mb-67761	SampType: MBLK			TestCode: EPA Method 8021B: Volatiles						
Client ID: PBS	Batch ID: 67761			RunNo: 88358						
Prep Date: 5/27/2022	Analysis Date: 5/29/2022			SeqNo: 3134080		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.88		1.000		87.6	70	130			

Sample ID: lcs-67768	SampType: LCS			TestCode: EPA Method 8021B: Volatiles						
Client ID: LCSS	Batch ID: 67768			RunNo: 88358						
Prep Date: 5/27/2022	Analysis Date: 5/30/2022			SeqNo: 3134102		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.86	0.025	1.000	0	86.3	80	120			
Toluene	0.87	0.050	1.000	0	87.0	80	120			
Ethylbenzene	0.86	0.050	1.000	0	85.9	80	120			
Xylenes, Total	2.6	0.10	3.000	0	85.1	80	120			
Surr: 4-Bromofluorobenzene	0.91		1.000		91.0	70	130			

Sample ID: mb-67768	SampType: MBLK			TestCode: EPA Method 8021B: Volatiles						
Client ID: PBS	Batch ID: 67768			RunNo: 88358						
Prep Date: 5/27/2022	Analysis Date: 5/30/2022			SeqNo: 3134103		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.87		1.000		86.9	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2205C48

08-Jun-22

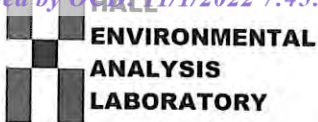
Client: Vertex Resources Services, Inc.**Project:** Onyx 29 CTB 1

Sample ID: 2205c48-004ams	SampType: MS	TestCode: EPA Method 8021B: Volatiles								
Client ID: BH22-15 0'	Batch ID: 67768	RunNo: 88358								
Prep Date: 5/27/2022	Analysis Date: 5/30/2022	SeqNo: 3134107	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.024	0.9785	0	94.1	68.8	120			
Toluene	0.94	0.049	0.9785	0	96.3	73.6	124			
Ethylbenzene	0.93	0.049	0.9785	0	95.3	72.7	129			
Xylenes, Total	2.8	0.098	2.935	0	94.7	75.7	126			
Surr: 4-Bromofluorobenzene	0.89		0.9785		91.2	70	130			

Sample ID: 2205c48-004amsd	SampType: MSD	TestCode: EPA Method 8021B: Volatiles								
Client ID: BH22-15 0'	Batch ID: 67768	RunNo: 88358								
Prep Date: 5/27/2022	Analysis Date: 5/30/2022	SeqNo: 3134108	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.025	0.9804	0	97.4	68.8	120	3.67	20	
Toluene	0.97	0.049	0.9804	0	99.3	73.6	124	3.23	20	
Ethylbenzene	0.97	0.049	0.9804	0	98.9	72.7	129	3.93	20	
Xylenes, Total	2.9	0.098	2.941	0	97.4	75.7	126	3.05	20	
Surr: 4-Bromofluorobenzene	0.89		0.9804		90.5	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		



Sample Log-In Check List

Client Name: Vertex Resources
Services, Inc.

Work Order Number: 2205C48

RcptNo: 1

Received By: Cheyenne Cason

5/27/2022 7:10:00 AM

Chen

Completed By: Tracy Casarrubias

5/27/2022 8:04:14 AM

Reviewed By: *just 5/27/22*

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. Received at least 1 vial with headspace $<1/4$ " for AQ VOA? Yes ☐ No ☐ NA ☒
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH:

(<2 or >12 unless noted)

Adjusted?

Checked by: *CMC 5/27/22*

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

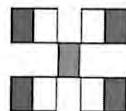
16. Additional remarks:

17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.1	Good	Yes			

Chain-of-Custody Record									
Client: <u>Vertex (Devon)</u>		Turn-Around Time: <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Rush							
Mailing Address:		Project Name: <u>DMXP 29 CTB 1</u>							
Phone #:		Project #: <u>22E-01720</u>							
email or Fax#:		Project Manager: <u>Monica Peppin</u>							
QA/QC Package:		<input type="checkbox"/> Standard <input type="checkbox"/> Level 4 (Full Validation)							
Accreditation:		<input type="checkbox"/> Az Compliance <input type="checkbox"/> NELAC <input type="checkbox"/> Other							
<input type="checkbox"/> EDD (Type)		<input checked="" type="checkbox"/> On Ice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No							
# of Coolers:		Cooler Temp (including CF): <u>2.1 - 0 = 2.1</u> (°C)							
Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.			
5/25	9:10	Soil	BH22-13	0' 14oz jar	ice	2205040			
	9:15		BH22-13	2'		001			
	9:20		BH22-14	0'		002			
	9:30		BH22-15	0'		003			
	9:40		BH22-16	0'		004			
	9:50		BH22-17	0'		005			
						006			
Date: 5/26		Time: 10:40 am		Relinquished by: <u>Sally Carttar</u>		Received by: <u>Quinn</u>		Date: 5/26/22 Time: 1040	
Date: 5/26		Time: 10:00		Relinquished by: <u>Quinn</u>		Received by: <u>Monica Peppin</u>		Date: 5/27/22 Time: 0710	

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.



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

email or Fax#:		Project Manager:		Monica Peppin		
QA/QC Package:						
<input type="checkbox"/> Standard		<input type="checkbox"/> Level 4 (Full Validation)				
Accreditation:		<input type="checkbox"/> Az Compliance				
<input type="checkbox"/> NELAC		<input type="checkbox"/> Other				
<input type="checkbox"/> EDD (Type)						
Sampler:		Sally Carttar				
On Ice:		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				
# of Coolers:		1				
Cooler Temp (including CFI):		2.1 - 0 = 2.1 (°C)				
Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
5/25	9:10	Soil	BH22-13	0' 14oz jar	ice	2205049
	9:15		BH22-13			001
	9:20		BH22-14			002
	9:30		BH22-15			003
	9:40		BH22-16			004
						005
	9:50		BH22-17			006

BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl ⁻ , F ⁻ , Br ⁻ , NO ₃ ⁻ , NO ₂ ⁻ , PO ₄ ⁻ , SO ₄ ⁻	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
----------------------------	----------------------------	----------------------------	--------------------	--------------------------	---------------	--	------------	-----------------	---------------------------------

Remarks:

direct bill down
work order 20956105



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

September 07, 2022

Kent Stallings

Devon Energy

6488 Seven Rivers Highway

Artesia, NM 88210

TEL: (505) 350-1336

FAX:

RE: Onyx 29 CTB1 Heater Treater

OrderNo.: 2208I02

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 11 sample(s) on 8/31/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order 2208102

Date Reported: 9/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: WES22-01 0.5'

Project: Onyx 29 CTB1 Heater Treater

Collection Date: 8/29/2022 10:00:00 AM

Lab ID: 2208102-001

Matrix: SOIL

Received Date: 8/31/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	9/1/2022 8:51:13 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/1/2022 8:51:13 PM
Surr: DNOP	97.4	21-129		%Rec	1	9/1/2022 8:51:13 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/1/2022 1:09:00 PM
Surr: BFB	95.5	37.7-212		%Rec	1	9/1/2022 1:09:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.025		mg/Kg	1	9/1/2022 1:09:00 PM
Toluene	ND	0.049		mg/Kg	1	9/1/2022 1:09:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	9/1/2022 1:09:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	9/1/2022 1:09:00 PM
Surr: 4-Bromofluorobenzene	91.8	70-130		%Rec	1	9/1/2022 1:09:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	110	60		mg/Kg	20	9/1/2022 6:27:20 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 1 of 15

Analytical Report

Lab Order 2208102

Date Reported: 9/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: WES22-02 0.5'

Project: Onyx 29 CTB1 Heater Treater

Collection Date: 8/29/2022 10:05:00 AM

Lab ID: 2208102-002

Matrix: SOIL

Received Date: 8/31/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	9/1/2022 9:02:15 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/1/2022 9:02:15 PM
Surr: DNOP	102	21-129		%Rec	1	9/1/2022 9:02:15 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/1/2022 1:48:00 PM
Surr: BFB	94.8	37.7-212		%Rec	1	9/1/2022 1:48:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.024		mg/Kg	1	9/1/2022 1:48:00 PM
Toluene	ND	0.048		mg/Kg	1	9/1/2022 1:48:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	9/1/2022 1:48:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	9/1/2022 1:48:00 PM
Surr: 4-Bromofluorobenzene	89.9	70-130		%Rec	1	9/1/2022 1:48:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	110	60		mg/Kg	20	9/1/2022 6:39:44 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2208102

Date Reported: 9/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: WES22-03 0.5'

Project: Onyx 29 CTB1 Heater Treater

Collection Date: 8/29/2022 10:10:00 AM

Lab ID: 2208102-003

Matrix: SOIL

Received Date: 8/31/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	9/1/2022 9:13:11 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	9/1/2022 9:13:11 PM
Surr: DNOP	75.8	21-129		%Rec	1	9/1/2022 9:13:11 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	9/1/2022 2:08:00 PM
Surr: BFB	92.7	37.7-212		%Rec	1	9/1/2022 2:08:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.025		mg/Kg	1	9/1/2022 2:08:00 PM
Toluene	ND	0.050		mg/Kg	1	9/1/2022 2:08:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	9/1/2022 2:08:00 PM
Xylenes, Total	ND	0.10		mg/Kg	1	9/1/2022 2:08:00 PM
Surr: 4-Bromofluorobenzene	89.6	70-130		%Rec	1	9/1/2022 2:08:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	190	60		mg/Kg	20	9/1/2022 8:15:48 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 3 of 15

Analytical Report

Lab Order 2208102

Date Reported: 9/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: WES22-04 0.5'

Project: Onyx 29 CTB1 Heater Treater

Collection Date: 8/29/2022 10:15:00 AM

Lab ID: 2208102-004

Matrix: SOIL

Received Date: 8/31/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	9/1/2022 9:24:07 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	9/1/2022 9:24:07 PM
Surr: DNOP	89.3	21-129		%Rec	1	9/1/2022 9:24:07 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/1/2022 2:27:00 PM
Surr: BFB	95.4	37.7-212		%Rec	1	9/1/2022 2:27:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.024		mg/Kg	1	9/1/2022 2:27:00 PM
Toluene	ND	0.048		mg/Kg	1	9/1/2022 2:27:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	9/1/2022 2:27:00 PM
Xylenes, Total	ND	0.095		mg/Kg	1	9/1/2022 2:27:00 PM
Surr: 4-Bromofluorobenzene	90.1	70-130		%Rec	1	9/1/2022 2:27:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	170	60		mg/Kg	20	9/1/2022 8:53:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 4 of 15

Analytical Report

Lab Order 2208102

Date Reported: 9/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: WES22-05 2'

Project: Onyx 29 CTB1 Heater Treater

Collection Date: 8/29/2022 10:20:00 AM

Lab ID: 2208102-005

Matrix: SOIL

Received Date: 8/31/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	9/1/2022 9:35:02 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	9/1/2022 9:35:02 PM
Surr: DNOP	62.8	21-129		%Rec	1	9/1/2022 9:35:02 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/1/2022 2:47:00 PM
Surr: BFB	103	37.7-212		%Rec	1	9/1/2022 2:47:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.024		mg/Kg	1	9/1/2022 2:47:00 PM
Toluene	ND	0.048		mg/Kg	1	9/1/2022 2:47:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	9/1/2022 2:47:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	9/1/2022 2:47:00 PM
Surr: 4-Bromofluorobenzene	92.9	70-130		%Rec	1	9/1/2022 2:47:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	150	60		mg/Kg	20	9/1/2022 9:30:13 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2208102

Date Reported: 9/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: WES22-06 2'

Project: Onyx 29 CTB1 Heater Treater

Collection Date: 8/29/2022 10:25:00 AM

Lab ID: 2208102-006

Matrix: SOIL

Received Date: 8/31/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	9/1/2022 9:45:58 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/1/2022 9:45:58 PM
Surr: DNOP	70.0	21-129		%Rec	1	9/1/2022 9:45:58 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	9/1/2022 3:07:00 PM
Surr: BFB	94.2	37.7-212		%Rec	1	9/1/2022 3:07:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.025		mg/Kg	1	9/1/2022 3:07:00 PM
Toluene	ND	0.050		mg/Kg	1	9/1/2022 3:07:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	9/1/2022 3:07:00 PM
Xylenes, Total	ND	0.10		mg/Kg	1	9/1/2022 3:07:00 PM
Surr: 4-Bromofluorobenzene	90.8	70-130		%Rec	1	9/1/2022 3:07:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	180	60		mg/Kg	20	9/1/2022 9:42:38 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 6 of 15

Analytical Report

Lab Order 2208102

Date Reported: 9/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: WES22-07 2'

Project: Onyx 29 CTB1 Heater Treater

Collection Date: 8/29/2022 10:30:00 AM

Lab ID: 2208102-007

Matrix: SOIL

Received Date: 8/31/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	9/1/2022 9:56:52 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	9/1/2022 9:56:52 PM
Surr: DNOP	66.9	21-129		%Rec	1	9/1/2022 9:56:52 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/1/2022 3:27:00 PM
Surr: BFB	95.4	37.7-212		%Rec	1	9/1/2022 3:27:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.024		mg/Kg	1	9/1/2022 3:27:00 PM
Toluene	ND	0.049		mg/Kg	1	9/1/2022 3:27:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	9/1/2022 3:27:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	9/1/2022 3:27:00 PM
Surr: 4-Bromofluorobenzene	90.9	70-130		%Rec	1	9/1/2022 3:27:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	290	60		mg/Kg	20	9/1/2022 2:03:11 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 7 of 15

Analytical Report

Lab Order 2208102

Date Reported: 9/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: WES22-08 2'

Project: Onyx 29 CTB1 Heater Treater

Collection Date: 8/29/2022 10:35:00 AM

Lab ID: 2208102-008

Matrix: SOIL

Received Date: 8/31/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	9/1/2022 10:07:44 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	9/1/2022 10:07:44 PM
Surr: DNOP	76.9	21-129		%Rec	1	9/1/2022 10:07:44 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	9/1/2022 3:47:00 PM
Surr: BFB	95.6	37.7-212		%Rec	1	9/1/2022 3:47:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.024		mg/Kg	1	9/1/2022 3:47:00 PM
Toluene	ND	0.047		mg/Kg	1	9/1/2022 3:47:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	9/1/2022 3:47:00 PM
Xylenes, Total	ND	0.095		mg/Kg	1	9/1/2022 3:47:00 PM
Surr: 4-Bromofluorobenzene	90.1	70-130		%Rec	1	9/1/2022 3:47:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	270	60		mg/Kg	20	9/1/2022 2:15:35 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 8 of 15

Analytical Report

Lab Order 2208102

Date Reported: 9/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-01 1'

Project: Onyx 29 CTB1 Heater Treater

Collection Date: 8/29/2022 10:40:00 AM

Lab ID: 2208102-009

Matrix: SOIL

Received Date: 8/31/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	9/1/2022 10:18:37 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/1/2022 10:18:37 PM
Surr: DNOP	73.5	21-129		%Rec	1	9/1/2022 10:18:37 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/1/2022 4:07:00 PM
Surr: BFB	94.9	37.7-212		%Rec	1	9/1/2022 4:07:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.024		mg/Kg	1	9/1/2022 4:07:00 PM
Toluene	ND	0.048		mg/Kg	1	9/1/2022 4:07:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	9/1/2022 4:07:00 PM
Xylenes, Total	ND	0.095		mg/Kg	1	9/1/2022 4:07:00 PM
Surr: 4-Bromofluorobenzene	91.5	70-130		%Rec	1	9/1/2022 4:07:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	97	60		mg/Kg	20	9/1/2022 10:44:40 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 9 of 15

Analytical Report

Lab Order 2208102

Date Reported: 9/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-02 1'

Project: Onyx 29 CTB1 Heater Treater

Collection Date: 8/29/2022 10:45:00 AM

Lab ID: 2208102-010

Matrix: SOIL

Received Date: 8/31/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	9/1/2022 10:29:27 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	9/1/2022 10:29:27 PM
Surr: DNOP	75.3	21-129		%Rec	1	9/1/2022 10:29:27 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	9/1/2022 4:26:00 PM
Surr: BFB	96.5	37.7-212		%Rec	1	9/1/2022 4:26:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.024		mg/Kg	1	9/1/2022 4:26:00 PM
Toluene	ND	0.047		mg/Kg	1	9/1/2022 4:26:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	9/1/2022 4:26:00 PM
Xylenes, Total	ND	0.094		mg/Kg	1	9/1/2022 4:26:00 PM
Surr: 4-Bromofluorobenzene	92.2	70-130		%Rec	1	9/1/2022 4:26:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	77	60		mg/Kg	20	9/1/2022 10:57:05 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2208102

Date Reported: 9/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-03 4'

Project: Onyx 29 CTB1 Heater Treater

Collection Date: 8/29/2022 10:50:00 AM

Lab ID: 2208102-011

Matrix: SOIL

Received Date: 8/31/2022 7:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	9/1/2022 10:40:20 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/1/2022 10:40:20 PM
Surr: DNOP	88.9	21-129		%Rec	1	9/1/2022 10:40:20 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	9/1/2022 4:46:00 PM
Surr: BFB	93.8	37.7-212		%Rec	1	9/1/2022 4:46:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.024		mg/Kg	1	9/1/2022 4:46:00 PM
Toluene	ND	0.047		mg/Kg	1	9/1/2022 4:46:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	9/1/2022 4:46:00 PM
Xylenes, Total	ND	0.095		mg/Kg	1	9/1/2022 4:46:00 PM
Surr: 4-Bromofluorobenzene	91.1	70-130		%Rec	1	9/1/2022 4:46:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	110	60		mg/Kg	20	9/1/2022 11:09:29 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2208I02

07-Sep-22

Client: Devon Energy
Project: Onyx 29 CTB1 Heater Treater

Sample ID: MB-69900	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 69900	RunNo: 90702								
Prep Date: 8/31/2022	Analysis Date: 8/31/2022	SeqNo: 3243373 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-69900	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 69900	RunNo: 90702								
Prep Date: 8/31/2022	Analysis Date: 8/31/2022	SeqNo: 3243374 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	100	90	110			

Sample ID: MB-69907	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 69907	RunNo: 90757								
Prep Date: 9/1/2022	Analysis Date: 9/1/2022	SeqNo: 3244232 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-69907	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 69907	RunNo: 90757								
Prep Date: 9/1/2022	Analysis Date: 9/1/2022	SeqNo: 3244233 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	98.6	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2208I02

07-Sep-22

Client: Devon Energy
Project: Onyx 29 CTB1 Heater Treater

Sample ID: LCS-69888	SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: LCSS	Batch ID: 69888		RunNo: 90763							
Prep Date: 8/31/2022	Analysis Date: 9/1/2022		SeqNo: 3244630		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	34	15	50.00	0	69.0	64.4	127			
Surr: DNOP	3.4		5.000		68.2	21	129			

Sample ID: MB-69888	SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: PBS	Batch ID: 69888		RunNo: 90763							
Prep Date: 8/31/2022	Analysis Date: 9/1/2022		SeqNo: 3244632		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	7.5		10.00		75.0	21	129			

Sample ID: LCS-69899	SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: LCSS	Batch ID: 69899		RunNo: 90763							
Prep Date: 8/31/2022	Analysis Date: 9/2/2022		SeqNo: 3246702		Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.7		5.000		114	21	129			

Sample ID: MB-69899	SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: PBS	Batch ID: 69899		RunNo: 90763							
Prep Date: 8/31/2022	Analysis Date: 9/2/2022		SeqNo: 3246703		Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	10		10.00		105	21	129			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2208102

07-Sep-22

Client: Devon Energy
Project: Onyx 29 CTB1 Heater Treater

Sample ID: Ics-69886	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: 69886		RunNo: 90749							
Prep Date: 8/31/2022	Analysis Date: 9/1/2022		SeqNo: 3243798		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	103	72.3	137			
Surr: BFB	2200		1000		217	37.7	212			S

Sample ID: mb-69886	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 69886		RunNo: 90749							
Prep Date: 8/31/2022	Analysis Date: 9/1/2022		SeqNo: 3243799		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	920		1000		92.1	37.7	212			

Sample ID: Ics-69889	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: 69889		RunNo: 90749							
Prep Date: 8/31/2022	Analysis Date: 9/1/2022		SeqNo: 3243822		Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	2100		1000		213	37.7	212			S

Sample ID: mb-69889	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 69889		RunNo: 90749							
Prep Date: 8/31/2022	Analysis Date: 9/1/2022		SeqNo: 3243823		Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	940		1000		94.0	37.7	212			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2208I02

07-Sep-22

Client: Devon Energy
Project: Onyx 29 CTB1 Heater Treater

Sample ID: ics-69886	SampType: LCS			TestCode: EPA Method 8021B: Volatiles						
Client ID: LCSS	Batch ID: 69886			RunNo: 90749						
Prep Date: 8/31/2022	Analysis Date: 9/1/2022			SeqNo: 3243846		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.81	0.025	1.000	0	81.0	80	120			
Toluene	0.83	0.050	1.000	0	83.1	80	120			
Ethylbenzene	0.84	0.050	1.000	0	84.3	80	120			
Xylenes, Total	2.5	0.10	3.000	0	83.9	80	120			
Surr: 4-Bromofluorobenzene	0.92		1.000		92.2	70	130			

Sample ID: mb-69886	SampType: MBLK			TestCode: EPA Method 8021B: Volatiles						
Client ID: PBS	Batch ID: 69886			RunNo: 90749						
Prep Date: 8/31/2022	Analysis Date: 9/1/2022			SeqNo: 3243847		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.90		1.000		89.8	70	130			

Sample ID: ics-69889	SampType: LCS			TestCode: EPA Method 8021B: Volatiles						
Client ID: LCSS	Batch ID: 69889			RunNo: 90749						
Prep Date: 8/31/2022	Analysis Date: 9/1/2022			SeqNo: 3243870		Units: %Rec				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.90		1.000		90.3	70	130			

Sample ID: mb-69889	SampType: MBLK			TestCode: EPA Method 8021B: Volatiles						
Client ID: PBS	Batch ID: 69889			RunNo: 90749						
Prep Date: 8/31/2022	Analysis Date: 9/1/2022			SeqNo: 3243871		Units: %Rec				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.89		1.000		89.5	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Devon Energy

Work Order Number: 2208102

RcptNo: 1

Received By: Juan Rojas

8/31/2022 7:40:00 AM

Completed By: Sean Livingston

8/31/2022 8:25:41 AM

Reviewed By:

jn 8/31/22

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☐ No ☐ NA ☒
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH:

(≤ 2 or >12 unless noted)

Adjusted? _____

Checked by: WPA 8.31.22

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.9	Good				

Chain-of-Custody Record

Client: Devon / Vertex

Mailing Address: On File

Phone #: _____

Email or Fax#: _____

QA/QC Package: ☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance ☐ NELAC ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time: 2- Day

☐ Standard ☒ Rush

Project Name: 074X 29 CTR 1

Heater Treaters

Project #: 22E-01720-002

Project Manager: Kent Stallings

Sampler: CD

On Ice: ☒ Yes ☐ No

of Coolers: 1

Cooler Temp (including CFV): 0.9-0=0.9 (°C)

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
8/29	10:00	Soil	WES22-01 0.5'	4 02	ICE	2208107
	10:05		WES22-02 0.5'			001
	10:10		WES22-03 0.5'			002
	10:15		WES22-04 0.5'			003
	10:20		WES22-05 2'			004
	10:25		WES22-06 2'			005
	10:30		WES22-07 2'			006
	10:35		WES22-08 2'			007
	10:40		BES22-01 1'			008
	10:45		BES22-02 1'			009
	10:50		BES22-03 4'			010
						011

Date: _____ Time: _____

Relinquished by: _____

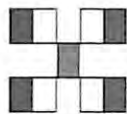
Date: 8/30/22 Time: 1900

Relinquished by: Quinn

Date: 8/31/22 Time: 7:40

Received by: Quinn Date: 8/30/22 Time: 9:15

Received by: Quinn Date: 8/31/22 Time: 7:40



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	PCRA 8 Metals	Cl ₂ F ₂ , Br ₂ , NO ₃ , NO ₂ , PO ₄ , SO ₄	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Remarks: CC: Chance Dixon
Direct Bill Devon
LO# 20456105



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

September 06, 2022

Kent Stallings

Vertex Resources Services, Inc.

3101 Boyd Drive

Carlsbad, NM 88220

TEL: (505) 506-0040

FAX

RE: Onyx 29 CTB1 Heater Treater

OrderNo.: 2208I67

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 7 sample(s) on 9/1/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order 2208167

Date Reported: 9/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-09 1'

Project: Onyx 29 CTB1 Heater Treater

Collection Date: 8/30/2022 11:30:00 AM

Lab ID: 2208167-001

Matrix: MEOH (SOIL)

Received Date: 9/1/2022 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	9/1/2022 5:43:16 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/1/2022 5:43:16 PM
Surr: DNOP	96.8	21-129		%Rec	1	9/1/2022 5:43:16 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/1/2022 8:49:35 AM
Surr: BFB	95.0	37.7-212		%Rec	1	9/1/2022 8:49:35 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	9/1/2022 8:49:35 AM
Toluene	ND	0.049		mg/Kg	1	9/1/2022 8:49:35 AM
Ethylbenzene	ND	0.049		mg/Kg	1	9/1/2022 8:49:35 AM
Xylenes, Total	ND	0.098		mg/Kg	1	9/1/2022 8:49:35 AM
Surr: 4-Bromofluorobenzene	90.0	70-130		%Rec	1	9/1/2022 8:49:35 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	180	60		mg/Kg	20	9/1/2022 3:56:45 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2208167

Date Reported: 9/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-10 1'

Project: Onyx 29 CTB1 Heater Treater

Collection Date: 8/30/2022 11:35:00 AM

Lab ID: 2208167-002

Matrix: MEOH (SOIL)

Received Date: 9/1/2022 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	9/1/2022 6:25:11 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	9/1/2022 6:25:11 PM
Surr: DNOP	96.5	21-129		%Rec	1	9/1/2022 6:25:11 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	9/1/2022 9:13:07 AM
Surr: BFB	95.7	37.7-212		%Rec	1	9/1/2022 9:13:07 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.021		mg/Kg	1	9/1/2022 9:13:07 AM
Toluene	ND	0.041		mg/Kg	1	9/1/2022 9:13:07 AM
Ethylbenzene	ND	0.041		mg/Kg	1	9/1/2022 9:13:07 AM
Xylenes, Total	ND	0.083		mg/Kg	1	9/1/2022 9:13:07 AM
Surr: 4-Bromofluorobenzene	90.4	70-130		%Rec	1	9/1/2022 9:13:07 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	130	60		mg/Kg	20	9/1/2022 4:09:10 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2208167

Date Reported: 9/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-11 1'

Project: Onyx 29 CTB1 Heater Treater

Collection Date: 8/30/2022 11:40:00 AM

Lab ID: 2208167-003

Matrix: MEOH (SOIL)

Received Date: 9/1/2022 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	9/1/2022 6:39:11 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	9/1/2022 6:39:11 PM
Surr: DNOP	80.1	21-129		%Rec	1	9/1/2022 6:39:11 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	9/1/2022 9:36:36 AM
Surr: BFB	96.6	37.7-212		%Rec	1	9/1/2022 9:36:36 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.020		mg/Kg	1	9/1/2022 9:36:36 AM
Toluene	ND	0.040		mg/Kg	1	9/1/2022 9:36:36 AM
Ethylbenzene	ND	0.040		mg/Kg	1	9/1/2022 9:36:36 AM
Xylenes, Total	ND	0.079		mg/Kg	1	9/1/2022 9:36:36 AM
Surr: 4-Bromofluorobenzene	91.0	70-130		%Rec	1	9/1/2022 9:36:36 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	110	61		mg/Kg	20	9/1/2022 4:46:22 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2208167

Date Reported: 9/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-12 1'

Project: Onyx 29 CTB1 Heater Treater

Collection Date: 8/30/2022 11:45:00 AM

Lab ID: 2208167-004

Matrix: MEOH (SOIL)

Received Date: 9/1/2022 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	9/1/2022 6:52:56 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/1/2022 6:52:56 PM
Surr: DNOP	94.9	21-129		%Rec	1	9/1/2022 6:52:56 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	9/1/2022 10:00:05 AM
Surr: BFB	95.1	37.7-212		%Rec	1	9/1/2022 10:00:05 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.020		mg/Kg	1	9/1/2022 10:00:05 AM
Toluene	ND	0.040		mg/Kg	1	9/1/2022 10:00:05 AM
Ethylbenzene	ND	0.040		mg/Kg	1	9/1/2022 10:00:05 AM
Xylenes, Total	ND	0.079		mg/Kg	1	9/1/2022 10:00:05 AM
Surr: 4-Bromofluorobenzene	90.2	70-130		%Rec	1	9/1/2022 10:00:05 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	9/1/2022 4:58:46 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2208167

Date Reported: 9/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-05 2'

Project: Onyx 29 CTB1 Heater Treater

Collection Date: 8/30/2022 11:55:00 AM

Lab ID: 2208167-005

Matrix: MEOH (SOIL)

Received Date: 9/1/2022 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	9/1/2022 7:06:43 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/1/2022 7:06:43 PM
Surr: DNOP	86.9	21-129		%Rec	1	9/1/2022 7:06:43 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	9/1/2022 10:23:30 AM
Surr: BFB	96.2	37.7-212		%Rec	1	9/1/2022 10:23:30 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	9/1/2022 10:23:30 AM
Toluene	ND	0.047		mg/Kg	1	9/1/2022 10:23:30 AM
Ethylbenzene	ND	0.047		mg/Kg	1	9/1/2022 10:23:30 AM
Xylenes, Total	ND	0.094		mg/Kg	1	9/1/2022 10:23:30 AM
Surr: 4-Bromofluorobenzene	90.7	70-130		%Rec	1	9/1/2022 10:23:30 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	110	60		mg/Kg	20	9/1/2022 5:11:11 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2208167

Date Reported: 9/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-06 2'

Project: Onyx 29 CTB1 Heater Treater

Collection Date: 8/30/2022 12:00:00 PM

Lab ID: 2208167-006

Matrix: MEOH (SOIL)

Received Date: 9/1/2022 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	9/1/2022 7:20:24 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/1/2022 7:20:24 PM
Surr: DNOP	94.5	21-129		%Rec	1	9/1/2022 7:20:24 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.7		mg/Kg	1	9/1/2022 10:47:01 AM
Surr: BFB	98.2	37.7-212		%Rec	1	9/1/2022 10:47:01 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.019		mg/Kg	1	9/1/2022 10:47:01 AM
Toluene	ND	0.037		mg/Kg	1	9/1/2022 10:47:01 AM
Ethylbenzene	ND	0.037		mg/Kg	1	9/1/2022 10:47:01 AM
Xylenes, Total	ND	0.075		mg/Kg	1	9/1/2022 10:47:01 AM
Surr: 4-Bromofluorobenzene	92.4	70-130		%Rec	1	9/1/2022 10:47:01 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	120	60		mg/Kg	20	9/1/2022 5:23:35 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2208167

Date Reported: 9/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-07 2'

Project: Onyx 29 CTB1 Heater Treater

Collection Date: 8/30/2022 12:05:00 PM

Lab ID: 2208167-007

Matrix: MEOH (SOIL)

Received Date: 9/1/2022 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	9/1/2022 7:34:07 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	9/1/2022 7:34:07 PM
Surr: DNOP	94.1	21-129		%Rec	1	9/1/2022 7:34:07 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	9/1/2022 11:10:32 AM
Surr: BFB	95.8	37.7-212		%Rec	1	9/1/2022 11:10:32 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.021		mg/Kg	1	9/1/2022 11:10:32 AM
Toluene	ND	0.043		mg/Kg	1	9/1/2022 11:10:32 AM
Ethylbenzene	ND	0.043		mg/Kg	1	9/1/2022 11:10:32 AM
Xylenes, Total	ND	0.086		mg/Kg	1	9/1/2022 11:10:32 AM
Surr: 4-Bromofluorobenzene	90.5	70-130		%Rec	1	9/1/2022 11:10:32 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	110	60		mg/Kg	20	9/1/2022 5:36:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 7 of 11

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2208I67

06-Sep-22

Client: Vertex Resources Services, Inc.**Project:** Onyx 29 CTB1 Heater Treater

Sample ID: MB-69904	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 69904	RunNo: 90757								
Prep Date: 8/31/2022	Analysis Date: 9/1/2022	SeqNo: 3244264	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-69904	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 69904	RunNo: 90757								
Prep Date: 8/31/2022	Analysis Date: 9/1/2022	SeqNo: 3244265	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	101	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2208I67

06-Sep-22

Client: Vertex Resources Services, Inc.**Project:** Onyx 29 CTB1 Heater Treater

Sample ID: MB-69910	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 69910	RunNo: 90727								
Prep Date: 9/1/2022	Analysis Date: 9/1/2022	SeqNo: 3243472 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.1		10.00		91.0	21	129			

Sample ID: LCS-69910	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 69910	RunNo: 90727								
Prep Date: 9/1/2022	Analysis Date: 9/1/2022	SeqNo: 3244526 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	15	50.00	0	88.8	64.4	127			
Surr: DNOP	4.7		5.000		94.8	21	129			

Sample ID: 2208I67-001AMS	SampType: MS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: WES22-09 1'	Batch ID: 69910	RunNo: 90727								
Prep Date: 9/1/2022	Analysis Date: 9/1/2022	SeqNo: 3244528 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	14	48.31	0	94.5	36.1	154			
Surr: DNOP	4.8		4.831		98.4	21	129			

Sample ID: 2208I67-001AMSD	SampType: MSD	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: WES22-09 1'	Batch ID: 69910	RunNo: 90727								
Prep Date: 9/1/2022	Analysis Date: 9/1/2022	SeqNo: 3244529 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	15	48.45	0	90.0	36.1	154	4.64	33.9	
Surr: DNOP	4.6		4.845		95.9	21	129	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2208I67

06-Sep-22

Client: Vertex Resources Services, Inc.**Project:** Onyx 29 CTB1 Heater Treater

Sample ID: mb	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: G90750	RunNo: 90750								
Prep Date:	Analysis Date: 9/1/2022	SeqNo: 3243897 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	990		1000		99.0	37.7	212			

Sample ID: 2.5ug gro lcs	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: G90750	RunNo: 90750								
Prep Date:	Analysis Date: 9/1/2022	SeqNo: 3243898 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	5.0	25.00	0	85.5	72.3	137			
Surr: BFB	1800		1000		183	37.7	212			

Sample ID: 2208i67-001ams	SampType: MS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: WES22-09 1'	Batch ID: G90750	RunNo: 90750								
Prep Date:	Analysis Date: 9/1/2022	SeqNo: 3243908 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	4.9	24.49	0	97.3	70	130			
Surr: BFB	2000		979.4		202	37.7	212			

Sample ID: 2208i67-001amsd	SampType: MSD	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: WES22-09 1'	Batch ID: G90750	RunNo: 90750								
Prep Date:	Analysis Date: 9/1/2022	SeqNo: 3243909 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	4.9	24.49	0	100	70	130	2.72	20	
Surr: BFB	2000		979.4		200	37.7	212	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2208I67

06-Sep-22

Client: Vertex Resources Services, Inc.**Project:** Onyx 29 CTB1 Heater Treater

Sample ID: mb	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: B90750	RunNo: 90750								
Prep Date:	Analysis Date: 9/1/2022	SeqNo: 3243938 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.93		1.000		93.5	70	130			

Sample ID: 100ng btex lcs	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: B90750	RunNo: 90750								
Prep Date:	Analysis Date: 9/1/2022	SeqNo: 3243939 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.87	0.025	1.000	0	86.6	80	120			
Toluene	0.90	0.050	1.000	0	90.4	80	120			
Ethylbenzene	0.90	0.050	1.000	0	89.8	80	120			
Xylenes, Total	2.7	0.10	3.000	0	89.6	80	120			
Surr: 4-Bromofluorobenzene	0.92		1.000		92.1	70	130			

Sample ID: 2208i67-002ams	SampType: MS	TestCode: EPA Method 8021B: Volatiles								
Client ID: WES22-10 1'	Batch ID: B90750	RunNo: 90750								
Prep Date:	Analysis Date: 9/1/2022	SeqNo: 3243949 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.72	0.021	0.8299	0	86.5	68.8	120			
Toluene	0.74	0.041	0.8299	0	89.6	73.6	124			
Ethylbenzene	0.74	0.041	0.8299	0	88.8	72.7	129			
Xylenes, Total	2.2	0.083	2.490	0	87.9	75.7	126			
Surr: 4-Bromofluorobenzene	0.78		0.8299		94.3	70	130			

Sample ID: 2208i67-002amsd	SampType: MSD	TestCode: EPA Method 8021B: Volatiles								
Client ID: WES22-10 1'	Batch ID: B90750	RunNo: 90750								
Prep Date:	Analysis Date: 9/1/2022	SeqNo: 3243950 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.72	0.021	0.8299	0	86.9	68.8	120	0.438	20	
Toluene	0.75	0.041	0.8299	0	89.8	73.6	124	0.212	20	
Ethylbenzene	0.75	0.041	0.8299	0	90.4	72.7	129	1.69	20	
Xylenes, Total	2.2	0.083	2.490	0	90.0	75.7	126	2.39	20	
Surr: 4-Bromofluorobenzene	0.76		0.8299		91.3	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		



**ENVIRONMENTAL
ANALYSIS
LABORATORY**

4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Vertex Resources
Services, Inc.**

Work Order Number: **2208167**

RcptNo: 1

Received By: **Cheyenne Cason**

9/1/2022 7:30:00 AM

Chad

Completed By: **Cheyenne Cason**

9/1/2022 7:50:30 AM

Chad

Reviewed By: *JA 9-1-22*

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐

2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐

4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐

5. Sample(s) in proper container(s)? Yes ☒ No ☐

6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐

7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐

8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐

9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☐ No ☐ NA ☒

10. Were any sample containers received broken? Yes ☐ No ☒

11. Does paperwork match bottle labels? Yes ☒ No ☐

(Note discrepancies on chain of custody)

12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐

13. Is it clear what analyses were requested? Yes ☒ No ☐

14. Were all holding times able to be met? Yes ☒ No ☐

(If no, notify customer for authorization.)

of preserved
bottles checked
for pH:

(<2 or >12 unless noted)

Adjusted?

Checked by: *JA 9/1/22*

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Not Present			



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

September 08, 2022

Kent Stallings

Vertex Resources Services, Inc.

3101 Boyd Drive

Carlsbad, NM 88220

TEL: (505) 506-0040

FAX:

RE: Onyx 29 CTB1 Heater Treater

OrderNo.: 2209087

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 15 sample(s) on 9/2/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order 2209087

Date Reported: 9/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-13 1'

Project: Onyx 29 CTB1 Heater Treater

Collection Date: 8/31/2022 9:15:00 AM

Lab ID: 2209087-001

Matrix: MEOH (SOIL)

Received Date: 9/2/2022 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	9/2/2022 11:41:47 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/2/2022 11:41:47 AM
Surr: DNOP	81.5	21-129		%Rec	1	9/2/2022 11:41:47 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.4		mg/Kg	1	9/2/2022 10:28:00 AM
Surr: BFB	91.6	37.7-212		%Rec	1	9/2/2022 10:28:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.022		mg/Kg	1	9/2/2022 10:28:00 AM
Toluene	ND	0.044		mg/Kg	1	9/2/2022 10:28:00 AM
Ethylbenzene	ND	0.044		mg/Kg	1	9/2/2022 10:28:00 AM
Xylenes, Total	ND	0.089		mg/Kg	1	9/2/2022 10:28:00 AM
Surr: 4-Bromofluorobenzene	85.8	70-130		%Rec	1	9/2/2022 10:28:00 AM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	ND	60		mg/Kg	20	9/2/2022 11:39:37 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 1 of 21

Analytical Report

Lab Order 2209087

Date Reported: 9/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-14 1'

Project: Onyx 29 CTB1 Heater Treater

Collection Date: 8/31/2022 9:20:00 AM

Lab ID: 2209087-002

Matrix: MEOH (SOIL)

Received Date: 9/2/2022 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	9/2/2022 10:50:36 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/2/2022 10:50:36 AM
Surr: DNOP	88.7	21-129		%Rec	1	9/2/2022 10:50:36 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.4		mg/Kg	1	9/2/2022 10:48:00 AM
Surr: BFB	92.1	37.7-212		%Rec	1	9/2/2022 10:48:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.022		mg/Kg	1	9/2/2022 10:48:00 AM
Toluene	ND	0.044		mg/Kg	1	9/2/2022 10:48:00 AM
Ethylbenzene	ND	0.044		mg/Kg	1	9/2/2022 10:48:00 AM
Xylenes, Total	ND	0.088		mg/Kg	1	9/2/2022 10:48:00 AM
Surr: 4-Bromofluorobenzene	88.5	70-130		%Rec	1	9/2/2022 10:48:00 AM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	65	61		mg/Kg	20	9/2/2022 11:52:01 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2209087

Date Reported: 9/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-15 1'

Project: Onyx 29 CTB1 Heater Treater

Collection Date: 8/31/2022 9:25:00 AM

Lab ID: 2209087-003

Matrix: MEOH (SOIL)

Received Date: 9/2/2022 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	9/2/2022 11:14:22 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	9/2/2022 11:14:22 AM
Surr: DNOP	97.6	21-129		%Rec	1	9/2/2022 11:14:22 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	9/2/2022 11:08:00 AM
Surr: BFB	94.3	37.7-212		%Rec	1	9/2/2022 11:08:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.021		mg/Kg	1	9/2/2022 11:08:00 AM
Toluene	ND	0.041		mg/Kg	1	9/2/2022 11:08:00 AM
Ethylbenzene	ND	0.041		mg/Kg	1	9/2/2022 11:08:00 AM
Xylenes, Total	ND	0.083		mg/Kg	1	9/2/2022 11:08:00 AM
Surr: 4-Bromofluorobenzene	88.4	70-130		%Rec	1	9/2/2022 11:08:00 AM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	ND	60		mg/Kg	20	9/2/2022 12:04:26 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 3 of 21

Analytical Report

Lab Order 2209087

Date Reported: 9/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-16 1'

Project: Onyx 29 CTB1 Heater Treater

Collection Date: 8/31/2022 9:30:00 AM

Lab ID: 2209087-004

Matrix: MEOH (SOIL)

Received Date: 9/2/2022 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	9/2/2022 11:38:16 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/2/2022 11:38:16 AM
Surr: DNOP	92.5	21-129		%Rec	1	9/2/2022 11:38:16 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	9/2/2022 11:27:00 AM
Surr: BFB	93.8	37.7-212		%Rec	1	9/2/2022 11:27:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.020		mg/Kg	1	9/2/2022 11:27:00 AM
Toluene	ND	0.040		mg/Kg	1	9/2/2022 11:27:00 AM
Ethylbenzene	ND	0.040		mg/Kg	1	9/2/2022 11:27:00 AM
Xylenes, Total	ND	0.081		mg/Kg	1	9/2/2022 11:27:00 AM
Surr: 4-Bromofluorobenzene	87.8	70-130		%Rec	1	9/2/2022 11:27:00 AM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	ND	59		mg/Kg	20	9/2/2022 12:41:40 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 4 of 21

Analytical Report

Lab Order 2209087

Date Reported: 9/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-17 1'

Project: Onyx 29 CTB1 Heater Treater

Collection Date: 8/31/2022 9:35:00 AM

Lab ID: 2209087-005

Matrix: MEOH (SOIL)

Received Date: 9/2/2022 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	9/2/2022 12:02:05 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	9/2/2022 12:02:05 PM
Surr: DNOP	94.0	21-129		%Rec	1	9/2/2022 12:02:05 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	9/2/2022 11:47:00 AM
Surr: BFB	93.0	37.7-212		%Rec	1	9/2/2022 11:47:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.020		mg/Kg	1	9/2/2022 11:47:00 AM
Toluene	ND	0.040		mg/Kg	1	9/2/2022 11:47:00 AM
Ethylbenzene	ND	0.040		mg/Kg	1	9/2/2022 11:47:00 AM
Xylenes, Total	ND	0.080		mg/Kg	1	9/2/2022 11:47:00 AM
Surr: 4-Bromofluorobenzene	89.4	70-130		%Rec	1	9/2/2022 11:47:00 AM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	ND	60		mg/Kg	20	9/2/2022 12:54:05 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 5 of 21

Analytical Report

Lab Order 2209087

Date Reported: 9/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-04 4'

Project: Onyx 29 CTB1 Heater Treater

Collection Date: 8/31/2022 9:40:00 AM

Lab ID: 2209087-006

Matrix: MEOH (SOIL)

Received Date: 9/2/2022 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	9/2/2022 12:25:56 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	9/2/2022 12:25:56 PM
Surr: DNOP	93.3	21-129		%Rec	1	9/2/2022 12:25:56 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	9/2/2022 9:02:21 AM
Surr: BFB	96.9	37.7-212		%Rec	1	9/2/2022 9:02:21 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.020		mg/Kg	1	9/2/2022 9:02:21 AM
Toluene	ND	0.041		mg/Kg	1	9/2/2022 9:02:21 AM
Ethylbenzene	ND	0.041		mg/Kg	1	9/2/2022 9:02:21 AM
Xylenes, Total	ND	0.082		mg/Kg	1	9/2/2022 9:02:21 AM
Surr: 4-Bromofluorobenzene	90.9	70-130		%Rec	1	9/2/2022 9:02:21 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	9/2/2022 11:16:16 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2209087

Date Reported: 9/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-08 2'

Project: Onyx 29 CTB1 Heater Treater

Collection Date: 8/31/2022 9:45:00 AM

Lab ID: 2209087-007

Matrix: MEOH (SOIL)

Received Date: 9/2/2022 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	9/2/2022 11:52:20 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/2/2022 11:52:20 AM
Surr: DNOP	79.4	21-129		%Rec	1	9/2/2022 11:52:20 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	9/2/2022 9:25:55 AM
Surr: BFB	97.5	37.7-212		%Rec	1	9/2/2022 9:25:55 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.020		mg/Kg	1	9/2/2022 9:25:55 AM
Toluene	ND	0.040		mg/Kg	1	9/2/2022 9:25:55 AM
Ethylbenzene	ND	0.040		mg/Kg	1	9/2/2022 9:25:55 AM
Xylenes, Total	ND	0.079		mg/Kg	1	9/2/2022 9:25:55 AM
Surr: 4-Bromofluorobenzene	91.4	70-130		%Rec	1	9/2/2022 9:25:55 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	9/2/2022 11:28:36 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2209087

Date Reported: 9/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-09 2'

Project: Onyx 29 CTB1 Heater Treater

Collection Date: 8/31/2022 9:55:00 AM

Lab ID: 2209087-008

Matrix: MEOH (SOIL)

Received Date: 9/2/2022 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	9/2/2022 12:02:56 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/2/2022 12:02:56 PM
Surr: DNOP	80.8	21-129		%Rec	1	9/2/2022 12:02:56 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	9/2/2022 9:49:26 AM
Surr: BFB	97.9	37.7-212		%Rec	1	9/2/2022 9:49:26 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.020		mg/Kg	1	9/2/2022 9:49:26 AM
Toluene	ND	0.040		mg/Kg	1	9/2/2022 9:49:26 AM
Ethylbenzene	ND	0.040		mg/Kg	1	9/2/2022 9:49:26 AM
Xylenes, Total	ND	0.080		mg/Kg	1	9/2/2022 9:49:26 AM
Surr: 4-Bromofluorobenzene	91.7	70-130		%Rec	1	9/2/2022 9:49:26 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	62	60		mg/Kg	20	9/2/2022 11:40:56 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Page 8 of 21

Analytical Report

Lab Order 2209087

Date Reported: 9/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-10 2'

Project: Onyx 29 CTB1 Heater Treater

Collection Date: 8/31/2022 9:55:00 AM

Lab ID: 2209087-009

Matrix: MEOH (SOIL)

Received Date: 9/2/2022 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	9/2/2022 12:13:32 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/2/2022 12:13:32 PM
Surr: DNOP	78.7	21-129		%Rec	1	9/2/2022 12:13:32 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.5		mg/Kg	1	9/2/2022 10:12:55 AM
Surr: BFB	98.0	37.7-212		%Rec	1	9/2/2022 10:12:55 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.017		mg/Kg	1	9/2/2022 10:12:55 AM
Toluene	ND	0.035		mg/Kg	1	9/2/2022 10:12:55 AM
Ethylbenzene	ND	0.035		mg/Kg	1	9/2/2022 10:12:55 AM
Xylenes, Total	ND	0.069		mg/Kg	1	9/2/2022 10:12:55 AM
Surr: 4-Bromofluorobenzene	92.1	70-130		%Rec	1	9/2/2022 10:12:55 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	9/2/2022 11:53:18 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2209087

Date Reported: 9/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-11 2'

Project: Onyx 29 CTB1 Heater Treater

Collection Date: 8/31/2022 10:00:00 AM

Lab ID: 2209087-010

Matrix: MEOH (SOIL)

Received Date: 9/2/2022 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	9/2/2022 12:24:09 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/2/2022 12:24:09 PM
Surr: DNOP	78.5	21-129		%Rec	1	9/2/2022 12:24:09 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	9/2/2022 10:36:27 AM
Surr: BFB	98.4	37.7-212		%Rec	1	9/2/2022 10:36:27 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.020		mg/Kg	1	9/2/2022 10:36:27 AM
Toluene	ND	0.040		mg/Kg	1	9/2/2022 10:36:27 AM
Ethylbenzene	ND	0.040		mg/Kg	1	9/2/2022 10:36:27 AM
Xylenes, Total	ND	0.080		mg/Kg	1	9/2/2022 10:36:27 AM
Surr: 4-Bromofluorobenzene	93.4	70-130		%Rec	1	9/2/2022 10:36:27 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	9/2/2022 12:05:39 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2209087

Date Reported: 9/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-09 2'

Project: Onyx 29 CTB1 Heater Treater

Collection Date: 8/31/2022 10:05:00 AM

Lab ID: 2209087-011

Matrix: MEOH (SOIL)

Received Date: 9/2/2022 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	9/2/2022 12:34:46 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/2/2022 12:34:46 PM
Surr: DNOP	73.8	21-129		%Rec	1	9/2/2022 12:34:46 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	9/2/2022 10:59:56 AM
Surr: BFB	95.9	37.7-212		%Rec	1	9/2/2022 10:59:56 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.021		mg/Kg	1	9/2/2022 10:59:56 AM
Toluene	ND	0.043		mg/Kg	1	9/2/2022 10:59:56 AM
Ethylbenzene	ND	0.043		mg/Kg	1	9/2/2022 10:59:56 AM
Xylenes, Total	ND	0.086		mg/Kg	1	9/2/2022 10:59:56 AM
Surr: 4-Bromofluorobenzene	90.6	70-130		%Rec	1	9/2/2022 10:59:56 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	9/2/2022 12:18:00 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2209087

Date Reported: 9/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-18 2'

Project: Onyx 29 CTB1 Heater Treater

Collection Date: 8/31/2022 10:30:00 AM

Lab ID: 2209087-012

Matrix: MEOH (SOIL)

Received Date: 9/2/2022 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	9/2/2022 12:45:25 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/2/2022 12:45:25 PM
Surr: DNOP	81.1	21-129		%Rec	1	9/2/2022 12:45:25 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	9/2/2022 11:23:32 AM
Surr: BFB	100	37.7-212		%Rec	1	9/2/2022 11:23:32 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.020		mg/Kg	1	9/2/2022 11:23:32 AM
Toluene	ND	0.040		mg/Kg	1	9/2/2022 11:23:32 AM
Ethylbenzene	ND	0.040		mg/Kg	1	9/2/2022 11:23:32 AM
Xylenes, Total	ND	0.080		mg/Kg	1	9/2/2022 11:23:32 AM
Surr: 4-Bromofluorobenzene	90.4	70-130		%Rec	1	9/2/2022 11:23:32 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	59		mg/Kg	20	9/2/2022 12:30:21 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2209087

Date Reported: 9/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-19 3'

Project: Onyx 29 CTB1 Heater Treater

Collection Date: 8/31/2022 10:35:00 AM

Lab ID: 2209087-013

Matrix: MEOH (SOIL)

Received Date: 9/2/2022 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	9/2/2022 12:56:03 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/2/2022 12:56:03 PM
Surr: DNOP	75.8	21-129		%Rec	1	9/2/2022 12:56:03 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	9/2/2022 11:47:12 AM
Surr: BFB	97.9	37.7-212		%Rec	1	9/2/2022 11:47:12 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.020		mg/Kg	1	9/2/2022 11:47:12 AM
Toluene	ND	0.040		mg/Kg	1	9/2/2022 11:47:12 AM
Ethylbenzene	ND	0.040		mg/Kg	1	9/2/2022 11:47:12 AM
Xylenes, Total	ND	0.079		mg/Kg	1	9/2/2022 11:47:12 AM
Surr: 4-Bromofluorobenzene	92.7	70-130		%Rec	1	9/2/2022 11:47:12 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	9/2/2022 12:42:42 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2209087

Date Reported: 9/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-20 3'

Project: Onyx 29 CTB1 Heater Treater

Collection Date: 8/31/2022 10:40:00 AM

Lab ID: 2209087-014

Matrix: MEOH (SOIL)

Received Date: 9/2/2022 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	9/2/2022 1:06:42 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	9/2/2022 1:06:42 PM
Surr: DNOP	82.1	21-129		%Rec	1	9/2/2022 1:06:42 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.4		mg/Kg	1	9/2/2022 12:10:49 PM
Surr: BFB	96.8	37.7-212		%Rec	1	9/2/2022 12:10:49 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.022		mg/Kg	1	9/2/2022 12:10:49 PM
Toluene	ND	0.044		mg/Kg	1	9/2/2022 12:10:49 PM
Ethylbenzene	ND	0.044		mg/Kg	1	9/2/2022 12:10:49 PM
Xylenes, Total	ND	0.089		mg/Kg	1	9/2/2022 12:10:49 PM
Surr: 4-Bromofluorobenzene	90.5	70-130		%Rec	1	9/2/2022 12:10:49 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	59		mg/Kg	20	9/2/2022 1:19:44 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Analytical Report

Lab Order 2209087

Date Reported: 9/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-21 1.5'

Project: Onyx 29 CTB1 Heater Treater

Collection Date: 8/31/2022 10:50:00 AM

Lab ID: 2209087-015

Matrix: MEOH (SOIL)

Received Date: 9/2/2022 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	9/2/2022 1:17:22 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	9/2/2022 1:17:22 PM
Surr: DNOP	83.3	21-129		%Rec	1	9/2/2022 1:17:22 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	9/2/2022 12:34:29 PM
Surr: BFB	101	37.7-212		%Rec	1	9/2/2022 12:34:29 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.021		mg/Kg	1	9/2/2022 12:34:29 PM
Toluene	ND	0.042		mg/Kg	1	9/2/2022 12:34:29 PM
Ethylbenzene	ND	0.042		mg/Kg	1	9/2/2022 12:34:29 PM
Xylenes, Total	ND	0.084		mg/Kg	1	9/2/2022 12:34:29 PM
Surr: 4-Bromofluorobenzene	94.5	70-130		%Rec	1	9/2/2022 12:34:29 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	9/2/2022 1:32:05 PM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2209087

08-Sep-22

Client: Vertex Resources Services, Inc.**Project:** Onyx 29 CTB1 Heater Treater

Sample ID: MB-69943	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 69943	RunNo: 90777								
Prep Date: 9/2/2022	Analysis Date: 9/2/2022	SeqNo: 3245095 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-69943	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 69943	RunNo: 90777								
Prep Date: 9/2/2022	Analysis Date: 9/2/2022	SeqNo: 3245096 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.4	90	110			

Sample ID: MB-69942	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 69942	RunNo: 90776								
Prep Date: 9/2/2022	Analysis Date: 9/2/2022	SeqNo: 3247708 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-69942	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 69942	RunNo: 90776								
Prep Date: 9/2/2022	Analysis Date: 9/2/2022	SeqNo: 3247709 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	98.8	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2209087

08-Sep-22

Client: Vertex Resources Services, Inc.**Project:** Onyx 29 CTB1 Heater Treater

Sample ID: MB-69936	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 69936	RunNo: 90778								
Prep Date: 9/2/2022	Analysis Date: 9/2/2022	SeqNo: 3244905 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.0		10.00		90.1	21	129			

Sample ID: LCS-69936	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 69936	RunNo: 90778								
Prep Date: 9/2/2022	Analysis Date: 9/2/2022	SeqNo: 3244906 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	15	50.00	0	90.5	64.4	127			
Surr: DNOP	4.4		5.000		87.5	21	129			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2209087

08-Sep-22

Client: Vertex Resources Services, Inc.**Project:** Onyx 29 CTB1 Heater Treater

Sample ID: mb	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: G90762	RunNo: 90762								
Prep Date:	Analysis Date: 9/2/2022	SeqNo: 3245256 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	980		1000		98.1	37.7	212			

Sample ID: 2.5ug gro lcs	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: G90762	RunNo: 90762								
Prep Date:	Analysis Date: 9/2/2022	SeqNo: 3245257 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	101	72.3	137			
Surr: BFB	2000		1000		203	37.7	212			

Sample ID: 2209087-006AMS	SampType: MS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: BES22-04 4'	Batch ID: G90762	RunNo: 90762								
Prep Date:	Analysis Date: 9/2/2022	SeqNo: 3245258 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	20	4.1	20.41	0	96.7	70	130			
Surr: BFB	1600		816.3		198	37.7	212			

Sample ID: 2209087-006AMSD	SampType: MSD	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: BES22-04 4'	Batch ID: G90762	RunNo: 90762								
Prep Date:	Analysis Date: 9/2/2022	SeqNo: 3245259 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	19	4.1	20.41	0	93.6	70	130	3.32	20	
Surr: BFB	1600		816.3		196	37.7	212	0	0	

Sample ID: 2.5ug gro lcs	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: A90773	RunNo: 90773								
Prep Date:	Analysis Date: 9/2/2022	SeqNo: 3245742 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	99.9	72.3	137			
Surr: BFB	2100		1000		210	37.7	212			

Sample ID: mb	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: A90773	RunNo: 90773								
Prep Date:	Analysis Date: 9/2/2022	SeqNo: 3245743 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209087

08-Sep-22

Client: Vertex Resources Services, Inc.
Project: Onyx 29 CTB1 Heater Treater

Sample ID: mb	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: A90773	RunNo: 90773								
Prep Date:	Analysis Date: 9/2/2022	SeqNo: 3245743 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		99.9	37.7	212			

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

Page 19 of 21

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2209087

08-Sep-22

Client: Vertex Resources Services, Inc.**Project:** Onyx 29 CTB1 Heater Treater

Sample ID: mb	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: B90762	RunNo: 90762								
Prep Date:	Analysis Date: 9/2/2022	SeqNo: 3245287 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.90		1.000		90.4	70	130			

Sample ID: 100ng btex lcs	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: B90762	RunNo: 90762								
Prep Date:	Analysis Date: 9/2/2022	SeqNo: 3245288 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.025	1.000	0	90.1	80	120			
Toluene	0.94	0.050	1.000	0	93.6	80	120			
Ethylbenzene	0.93	0.050	1.000	0	93.0	80	120			
Xylenes, Total	2.8	0.10	3.000	0	92.0	80	120			
Surr: 4-Bromofluorobenzene	0.93		1.000		92.7	70	130			

Sample ID: 2209087-007AMS	SampType: MS	TestCode: EPA Method 8021B: Volatiles								
Client ID: BES22-08 2'	Batch ID: B90762	RunNo: 90762								
Prep Date:	Analysis Date: 9/2/2022	SeqNo: 3245289 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.70	0.020	0.7905	0	88.3	68.8	120			
Toluene	0.72	0.040	0.7905	0	90.8	73.6	124			
Ethylbenzene	0.72	0.040	0.7905	0	91.3	72.7	129			
Xylenes, Total	2.1	0.079	2.372	0	90.4	75.7	126			
Surr: 4-Bromofluorobenzene	0.74		0.7905		93.9	70	130			

Sample ID: 2209087-007AMSD	SampType: MSD	TestCode: EPA Method 8021B: Volatiles								
Client ID: BES22-08 2'	Batch ID: B90762	RunNo: 90762								
Prep Date:	Analysis Date: 9/2/2022	SeqNo: 3245290 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.68	0.020	0.7905	0	86.5	68.8	120	2.06	20	
Toluene	0.71	0.040	0.7905	0	89.6	73.6	124	1.37	20	
Ethylbenzene	0.71	0.040	0.7905	0	89.5	72.7	129	1.98	20	
Xylenes, Total	2.1	0.079	2.372	0	89.3	75.7	126	1.28	20	
Surr: 4-Bromofluorobenzene	0.75		0.7905		94.9	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2209087

08-Sep-22

Client: Vertex Resources Services, Inc.**Project:** Onyx 29 CTB1 Heater Treater

Sample ID: mb	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: B90773	RunNo: 90773								
Prep Date:	Analysis Date: 9/2/2022	SeqNo: 3245771 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.97		1.000		96.5	70	130			

Sample ID: 100ng btex lcs2	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: B90773	RunNo: 90773								
Prep Date:	Analysis Date: 9/2/2022	SeqNo: 3245772 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.81	0.025	1.000	0	80.7	80	120			
Toluene	0.84	0.050	1.000	0	83.7	80	120			
Ethylbenzene	0.86	0.050	1.000	0	85.5	80	120			
Xylenes, Total	2.6	0.10	3.000	0	85.4	80	120			
Surr: 4-Bromofluorobenzene	0.98		1.000		98.4	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit



4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Vertex Resources Services, Inc.**

Work Order Number: **2209087**

RcptNo: 1

Received By: **Cheyenne Cason** 9/2/2022 7:30:00 AM

Completed By: **Cheyenne Cason** 9/2/2022 7:39:32 AM

Reviewed By: *See 9/2/22*

Chad

Chad

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☐ No ☐ NA ☒
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH:

(<2 or >12 unless noted)

Adjusted?

Checked by: *JA 9/2/22*

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.3	Good	Not Present			
2	0.9	Good	Not Present			

Incident ID	nAPP2213024415
District RP	
Facility ID	
Application ID	

Closure

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

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

- ☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☒ Description of remediation activities

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

Printed Name: Dale Woodall Title: Environment Professional

Signature: Dale Woodall Date: 10/19/2022

email: dale.wodall@dmv.com Telephone: 575-7481838

OCD Only

Received by: Date:

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: Date:

Printed Name: Title:

Incident ID	nAPP2116441032
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>75</u> (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

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

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

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

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

Incident ID	nAPP2116441032
District RP	
Facility ID	
Application ID	

Closure

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

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

- ☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☒ Description of remediation activities

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

Printed Name: Dale Woodall Title: Environment Professional

Signature: Dale Woodall Date: 10/19/2022

email: dale.woodall@dvn.com Telephone: 575-748-1838

OCD Only

Received by: _____ Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

District I

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

District II

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

District III

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

District IV

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

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

CONDITIONS

Action 155129

CONDITIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 155129
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	We have received your closure report and final C-141 for Incident #NAPP2116441032 ONYX 29 CTB 1, thank you. This closure is approved.	11/22/2022