

Incident ID	nAPP2210924425
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: Env. Professional

Signature: *Dale Woodall* Date: 12/2/2022

email: dale.woodall@dvn.com Telephone: 575-748-1838

OCD Only

Received by: Robert Hamlet Date: 3/7/2023

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: 3/7/2023

Printed Name: Robert Hamlet Title: Environmental Specialist - Advanced

Incident ID	nAPP2210924425
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?	18 (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 type="checkbox"/> Yes <input checked="" 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 type="checkbox"/> Yes <input checked="" 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 1/2-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.

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2210924425
District RP	
Facility ID	
Application ID	

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: Dale Woodall Title: Env. Professional

Signature: *Dale Woodall* Date: 12/2/2022

email: dale.woodall@dvn.com Telephone: 575-748-1838

OCD Only

Received by: Jocelyn Harimon Date: 12/02/2022

Incident ID	nAPP2210924425
District RP	
Facility ID	
Application ID	

Remediation Plan

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

- Detailed description of proposed remediation technique
- Scaled sitemap with GPS coordinates showing delineation points
- Estimated volume of material to be remediated
- Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: *Each of the following items must be confirmed as part of any request for deferral of remediation.*

- Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- Extents of contamination must be fully delineated.
- Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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

Printed Name: Dale Woodall Title: Env. Professional
 Signature: Dale Woodall Date: 12/2/2022
 email: dale.woodall@dvn.com Telephone: 575-748-1838

OCD Only

Received by: Jocelyn Harimon Date: 12/02/2022

- Approved Approved with Attached Conditions of Approval Denied Deferral Approved

Signature: _____ Date: _____

Incident ID	nAPP2210924425
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: Env. Professional

Signature: Dale Woodall Date: 12/2/2022

email: dale.woodall@dvn.com Telephone: 575-748-1838

OCD Only

Received by: Jocelyn Harimon Date: 12/02/2022

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: _____ Date: _____

Printed Name: _____ Title: _____



November 17, 2022

Vertex Project #: 22E-01417

Spill Closure Report: Papas Fritas 27 CTB 1
Unit O, Section 27, Township 23 South, Range 29 East
API: N/A
County: Eddy
Incident Reports: nAPP2129171458, nAPP2127146416 and nAPP221094425

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 Papas Fritas 27 CTB 1 (hereafter referred to as “Papas Fritas”). Devon submitted an initial C-141 Release Notification (Attachment 1) to the New Mexico Oil Conservation Division (NMOCD) District 2 on September 28, 2021. Incident ID numbers nAPP2129171458 and nAPP2127146416 were assigned to the incidents.

This letter provides a description of the release assessment and remediation activities that demonstrate 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 site 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

nAPP221094425

The release for nAPP2129171458 occurred near the storage tanks. The cause of the release is unknown. The incident resulted in the release of 13 barrels of produced water into the containment. No fluids were recovered from the release. No oil or produced water was released into waterways.

nAPP2127146416 and nAPP2129171458

The release for nAPP2127146416 and nAPP2129171458 occurred on the north/northwest side of the containment at Papas Fritas when the water-transfer pump developed a leak. The fluid traveled north and northwest of the oil tanks and released into the pasture north of the pad. The horizontal extent of the release was approximately 336 feet long and 301 feet wide. After the release, a vacuum truck was brought on-site to recover the fluids. Approximately

vertex.ca

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

120 barrels of fluids were recovered. No oil or produced water was released into waterways.

Site Characterization

The releases at Devon's Papas Fritas site occurred on federal land at 32.271611° N, 103.969944° W, approximately 6.4 miles southwest of Malaga, New Mexico. The legal description for the site is Unit O, Section 27, Township 23 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.

Papas Fritas is typical of oil and gas exploration and production sites on the western portion of the Permian Basin and is currently being used for oil and gas production and storage. The following sections specifically describe the release areas on the north side of the pad (Attachment 2).

The nearest active well to Papas Fritas is a New Mexico Office of the State Engineer (NMOSE) monitoring well located approximately 1.06 miles northwest of the site (United States Department of the Interior, United States Geological Survey, 2021). Data from 2000 shows the NMOSE well had a depth to groundwater of 18 feet below ground surface (bgs). Information pertaining to the depth to groundwater determination is included in Attachment 4.

The surrounding landscape is associated with plains, interdunes, and dunes. With elevations ranging between 2,700 and 5,500 feet. The climate is semiarid with average annual precipitation ranging between 5 and 15 inches. Using information from the United States Department of Agriculture, the dominant vegetation was determined to be black 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 Papas Fritas is comprised primarily of Qep – Eolian and Piedmont deposits from the Holocene to lower Pleistocene ages (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 Pajarito Loamy Fine Sand. The soil is well-drained with a very low runoff. The karst geology potential for Papas Fritas is medium (United States Department of the Interior, Bureau of Land Management, 2018).

There is no surface water located at Papas Fritas. The nearest significant watercourse, as defined in Subsection P of 19.15.17.7 NMAC, is an intermittent stream located 0.67 miles west of the site. At Papas Fritas, there are no continuously flowing water courses 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 4) 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 Papas Fritas are subject to the requirements of Paragraph (4) of Subsection C of 19.15.29.12 NMAC. There are no active water wells within a half-mile of the site to accurately determine the depth to groundwater; 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.

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

TDS - Total dissolved solids

TPH - Total petroleum hydrocarbons = gasoline range organics (GRO) + diesel range organics (DRO) + motor oil range organics (MRO)

BTEX - Benzene, toluene, ethylbenzene, and xylenes

Liner Inspection

nAPP221094425

On May 11, 2022, Vertex provided 48-hour notification of the liner inspection to NMOCD District 2 as required by Subparagraph (a) of Paragraph (5) of Subsection A 19.15.29.11 NMAC (Attachment 5). On May 14, 2022, Vertex was on-site to conduct an inspection of the lined containment and verify that the liner was intact and had the ability to contain the release. The Daily Field Report and associated photographs of the liner inspection are included in Attachment 6. The inspection confirmed the liner remained intact and had the ability to contain the release.

Remedial Actions

nAPP2127146416 and nAPP2129171458

On October 6, 2021, Safety & Environmental Solutions, Inc. (SESI) conducted initial site assessment activities through field screening procedures. Characterization sample points for SESI's delineation are included on Figure 1 (Attachment 2). Characterization sample analytical data from SESI's delineation are summarized in Attachment 3. Vertex was not affiliated with the initial site characterization or work plan. Remediation fieldwork was completed by Carmona Resources and confirmatory sampling was completed by Vertex. SESI's full remediation work plan is included in Attachment 9.

Excavation of impacted soils was conducted between September 23, 2022, and October 27, 2022. A Vertex representative was on-site from October 5 to 27, 2022, to conduct field screen procedures to determine the final horizontal and vertical extents of the excavation area. Initial and final Daily Field Reports and associated photographs are included in Attachment 6.

Between September 26 and October 25, 2022, Vertex provided three 48-hour notifications of confirmation sampling to NMOCD (Attachment 5), as required by Subparagraph (a) of Paragraph (1) of Subsection D 19.15.29.12 NMAC. Between

vertex.ca

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

October 3 and 27, 2022, Vertex collected a total of 148 five-point composite confirmatory samples from the base and side walls of the excavation, at depths ranging between the ground surface and 4 feet bgs. Confirmation sample points are included on Figure 3 (Attachment 2). 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. On October 27, 2022, excavation was completed. The final total square footage of the excavation was 22,382 square feet.

Laboratory analyses included Method 300.0 for chlorides, Method 8021B for volatile organics, including BTEX, and EPA Method 8015 for TPH, including DRO, MRO, and GRO. Confirmatory sampling analytical data are summarized in Attachment 3. Laboratory data reports and chain of custody forms are included in Attachment 7.

A GeoExplorer 7000 Series Trimble global positioning system (GPS) unit, was used to map the approximate center of each of the five-point composite samples. The confirmatory sample locations are presented in Figure 3 (Attachment 2). Relevant equipment and prominent features/reference points at the site are mapped as well.

Closure Request

Vertex recommends no additional action to address the remediation area at Papas Fritas. Laboratory analyses of confirmation samples collected at Papas Fritas show final confirmatory 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 this release site.

Vertex requests that these incidents (nAPP2129171458, nAPP2127146416, and nAPP221094425) 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 is 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 remediation area at Papas Fritas.

Devon Energy Production Company
Papás Fritas 27 CTB 1

2022 Spill Assessment and Closure
November 2022

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

Chance Dixon

November 17, 2022

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

Date

November 17, 2022

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

Date

Attachments

- Attachment 1. NMOCD C-141 Reports
- Attachment 2. Figures
- Attachment 3. Summarized Laboratory Data Tables
- Attachment 4. Closure Criteria for Soils Impacted by a Release Research Determination Documentation
- Attachment 5. Required 48-hour Notifications of Liner Inspection and Confirmatory Sampling to NMOCD
- Attachment 6. Daily Field Reports with Photographs
- Attachment 7. Laboratory Data Reports and Chain of Custody Forms
- Attachment 8. Extension Denial After 90 Days from NMOCD
- Attachment 9. Safety & Environmental Solution Inc.'s Remediation Workplan

vertex.ca

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

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. (2022). *Interactive Geologic Map*. Retrieved from <http://geoinfo.nmt.edu>
- New Mexico Office of the State Engineer, New Mexico Water Rights Reporting System. (2022). *Well Log/Meter Information Report*. Retrieved from <http://nmwrrs.ose.state.nm.us/nmwrrs/meterReport.html>
- New Mexico Oil Conservation Division. (2018). *New Mexico Administrative Code – Natural Resources and Wildlife Oil and Gas Releases*. Santa Fe, New Mexico.
- 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. (2022). *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. (2018). *New Mexico Cave/Karsts*. Retrieved from <https://www.blm.gov/programs/recreation/recreation-programs/caves/new-mexico>
- United State Fish and Wildlife Service. (2022). *National Wetland Inventory Surface Waters and Wetland*. Retrieved from <https://www.fws.gov/wetlands/data/mapper.html>

Limitations

This report has been prepared for the sole benefit of Devon Energy Production Company (Devon). 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 professional and technical staff in accordance with generally accepted scientific practices current at the time the work was performed. The conclusions and recommendations presented represent the best judgement of Vertex based on the data collected during the assessment. Due to the nature of the assessment and the data available, Vertex cannot warrant against undiscovered environmental liabilities. Conclusions and recommendations presented in this report should not be considered legal advice.

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	nAPP2210924425
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party	Devon Energy Production Company	OGRID	6137
Contact Name	Wesley Mathews	Contact Telephone	
Contact email	Wesley.Mathews@dvn.com	Incident # (assigned by OCD)	
Contact mailing address	6488 Seven Rivers Hwy Artesia, NM 88210		

Location of Release Source

Latitude 32.271611 Longitude -103.969944
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Papas Fritas 27 CTB 1	Site Type	Oil
Date Release Discovered	04/18/2022	API# (if applicable)	

Unit Letter	Section	Township	Range	County
O	27	23S	29E	Eddy

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

Nature and Volume of Release

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

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 13 BBLS	Volume Recovered (bbls) 0 BBLS
	Is the concentration of dissolved chloride 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: Pinhole developed on a water line.

Incident ID	nAPP2210924425
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 checked="" 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 checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" 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: _____ Date: _____ email: _____ Telephone: _____
<u>OCD Only</u> Received by: _____ Date: _____

Incident ID	nAPP2210924425
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?	18 (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 type="checkbox"/> Yes <input checked="" 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 type="checkbox"/> Yes <input checked="" 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 1/2-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	nAPP2210924425
District RP	
Facility ID	
Application ID	

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: Dale Woodall Title: Env. Professional

Signature: *Dale Woodall* Date: 12/2/2022

email: dale.woodall@dvn.com Telephone: 575-748-1838

OCD Only

Received by: _____ Date: _____

Incident ID	nAPP2210924425
District RP	
Facility ID	
Application ID	

Remediation Plan

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

- Detailed description of proposed remediation technique
- Scaled sitemap with GPS coordinates showing delineation points
- Estimated volume of material to be remediated
- Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: *Each of the following items must be confirmed as part of any request for deferral of remediation.*

- Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- Extents of contamination must be fully delineated.
- Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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

Printed Name: Dale Woodall Title: Env. Professional
 Signature: Dale Woodall Date: 12/2/2022
 email: dale.woodall@dvn.com Telephone: 575-748-1838

OCD Only

Received by: _____ Date: _____

- Approved Approved with Attached Conditions of Approval Denied Deferral Approved

Signature: _____ Date: _____

Incident ID	nAPP2210924425
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: Env. Professional

Signature: *Dale Woodall* Date: 12/2/2022

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
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	nAPP2127146416
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party	Devon Energy Production Company	OGRID	6137
Contact Name	Wesley Mathews	Contact Telephone	
Contact email	Wesley.Mathews@dmn.com	Incident # (assigned by OCD)	
Contact mailing address	6488 Seven Rivers Hwy Artesia, NM 88210		

Location of Release Source

Latitude 32.271611 Longitude -103.969944
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Papas Fritas 27 CTB 1	Site Type	Oil
Date Release Discovered	9/28/2021	API# (if applicable)	

Unit Letter	Section	Township	Range	County
O	27	23S	29E	Eddy

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

Nature and Volume of Release

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

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 150.32 BBLS	Volume Recovered (bbls) 120 BBLS
	Is the concentration of dissolved chloride 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: Transfer pump developed a leak.

Incident ID	nAPP2127146416
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? The release was more than 25 barrels.
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 checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" 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: _____ Date: _____ email: _____ Telephone: _____
<u>OCD Only</u> Received by: _____ Date: _____

Incident ID	nAPP2127146416
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?	18 (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 type="checkbox"/> Yes <input checked="" 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 type="checkbox"/> Yes <input checked="" 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 1/2-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	nAPP2127146416
District RP	
Facility ID	
Application ID	

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: Dale Woodall Title: Env. Professional

Signature: *Dale Woodall* Date: 12/2/2022

email: dale.woodall@dvn.com Telephone: 575-748-1838

OCD Only

Received by: _____ Date: _____

Incident ID	nAPP2127146416
District RP	
Facility ID	
Application ID	

Remediation Plan

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

- Detailed description of proposed remediation technique
- Scaled sitemap with GPS coordinates showing delineation points
- Estimated volume of material to be remediated
- Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: *Each of the following items must be confirmed as part of any request for deferral of remediation.*

- Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- Extents of contamination must be fully delineated.
- Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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

Printed Name: Dale Woodall Title: Env. Professional
 Signature: *Dale Woodall* Date: 12/2/2022
 email: dale.woodall@dnv.com Telephone: 575-748-1838

OCD Only

Received by: _____ Date: _____

- Approved Approved with Attached Conditions of Approval Denied Deferral Approved

Signature: _____ Date: _____

Incident ID	nAPP2127146416
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: Env. Professional

Signature: Dale Woodall Date: 12-2-2022

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
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

State of New Mexico
Oil Conservation Division

Page 2

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>11/9/2021</u>

Incident ID	nAPP2129171458
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?	18 (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 type="checkbox"/> Yes <input checked="" 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 type="checkbox"/> Yes <input checked="" 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 1/2-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.

State of New Mexico
Oil Conservation Division

Page 4

Incident ID	nAPP2129171458
District RP	
Facility ID	
Application ID	

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: Dale Woodall Title: Env. Professional
 Signature: *Dale Woodall* Date: 12-2-2022
 email: dale.woodall@dvn.com Telephone: 575-748-1838

OCD Only

Received by: _____ Date: _____

Incident ID	nAPP2129171458
District RP	
Facility ID	
Application ID	

Remediation Plan

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

- Detailed description of proposed remediation technique
- Scaled sitemap with GPS coordinates showing delineation points
- Estimated volume of material to be remediated
- Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: *Each of the following items must be confirmed as part of any request for deferral of remediation.*

- Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- Extents of contamination must be fully delineated.
- Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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

Printed Name: Dale Woodall Title: Env. Specialist
 Signature: *Dale Woodall* Date: 12/2/2022
 email: dale.woodall@dvn.com Telephone: 575-748-1838

OCD Only

Received by: _____ Date: _____

- Approved Approved with Attached Conditions of Approval Denied Deferral Approved

Signature: _____ Date: _____

Incident ID	nAPP2129171458
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: Env. Professional
 Signature: *Dale Woodall* Date: 12/2/2022
 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: _____

Measurements Of Standing Fluid	
Length(Ft)	120
Width(Ft)	60
Depth(in.)	
Total Capacity without tank displacements (bbls)	0.25
No. of 500 bbl Tanks In Standing Fluid	8
No. of Other Tanks In Standing Fluid	
OD Of Other Tanks In Standing Fluid(feet)	16
Total Volume of standing fluid accounting for tank displacement.	22.39

Contaminated Soil measurement	
Area (square feet)	Depth(inches)
8228.513	0.016
Cubic Feet of Soil Impacted	10.971
Barrels of Soil Impacted	1.96
Soil Type	Clay/Sand
Barrels of Oil Assuming 100% Saturation	0.29
Saturation	Fluid present with shovel/backhoe
Estimated Barrels of Oil Released	0.29
Free Standing Fluid Only	
Area (square feet)	Depth(inches)
8228.513	0.016
Standing fluid	1.956
Total fluids spilled	2.249

NAPP2129171458

Contaminated Soil measurement	
Area (square feet)	Depth(inches)
<u>29429</u>	<u>0.250</u>
Cubic Feet of Soil Impacted	<u>613.104</u>
Barrels of Soil Impacted	<u>109.29</u>
Soil Type	Clay/Sand
Barrels of Oil Assuming 100% Saturation	<u>16.39</u>
Saturation	Fluid present with shovel/backhoe
Estimated Barrels of Oil Released	16.39
Free Standing Fluid Only	
Area (square feet)	Depth(inches)
<u>29429</u>	<u>0.250</u>
Standing fluid	<u>109.288</u>
Total fluids spilled	<u>125.681</u>

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 56657

CONDITIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 56657
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
marcus	None	11/9/2021

ATTACHMENT 2

Devon Energy

Papas Fritas CTB 1
27-23S-29E
Site Map w Samples
10.6.21

Legend

- ◆ @ 2'
- Feature 1
- Spill Area 1

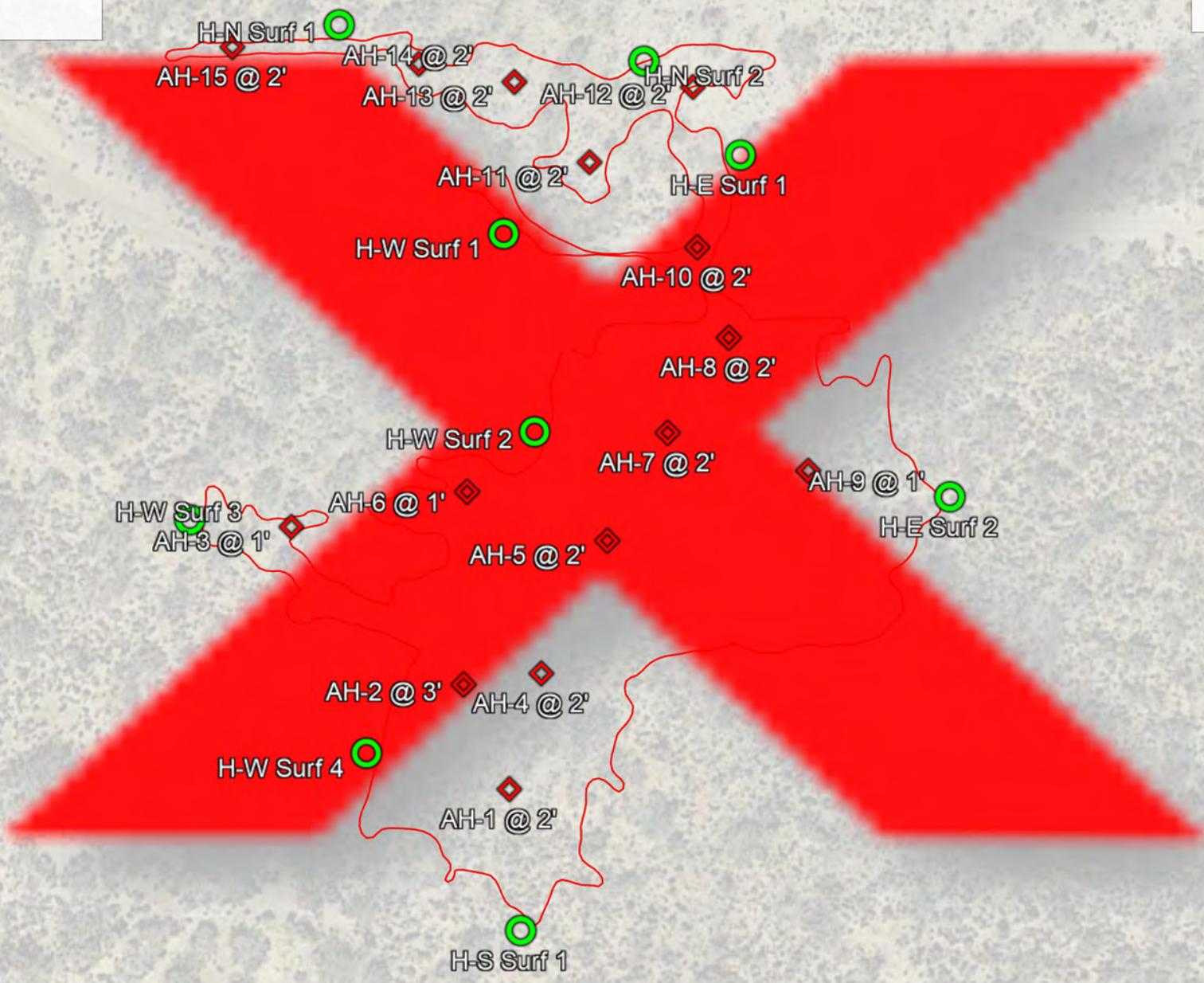


Figure 1 - SESI Characterization - See Full Workplan (Attachment 9)



 Approximate Lease Boundary
  Containment (~7,778 sq. ft.)

Document Path: G:\1-Projects\US PROJECTS\Devon Energy Corporation\2022\22E-01417 - Papa Fritas 27 CTB 1\Figure 2 Liner Inspection Papa Fritas 27 CTB 1.mxd



0 5 10 20 ft.
 NAD 1983 UTM Zone 13N
 Date: Nov 09/22

Map Center:
 Lat: 32.271803,
 Long: -103.969786



Liner Inspection
Papas Fritas 27 CTB 1

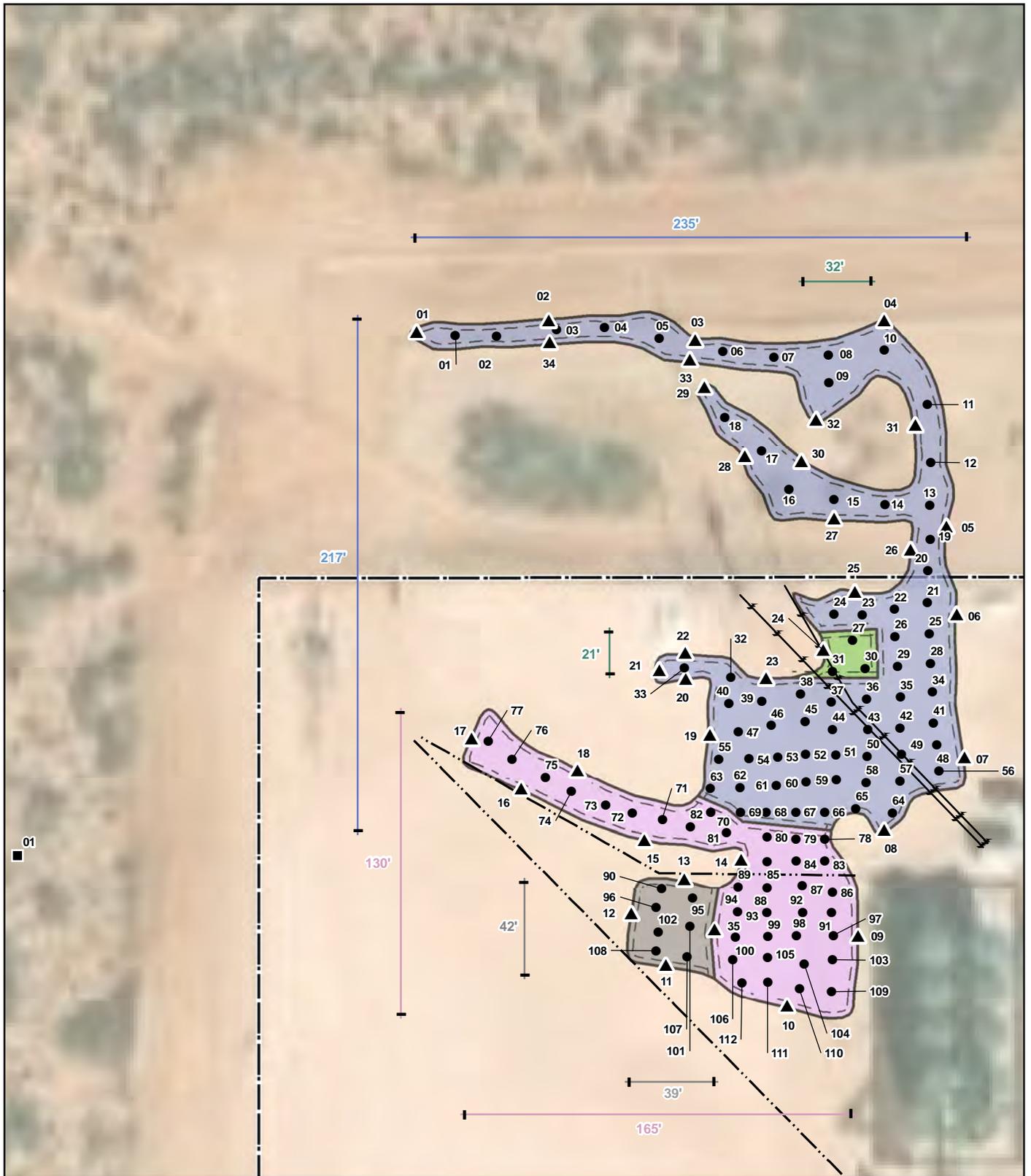
FIGURE:

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 Maxar, 2022. Features from imagery, Vertex Professional Services Ltd., 2022.



- Background Sample ⚡ Electrical Line (Dual Line) [Blue Box] Excavation to 2' depth (6,290 sq. ft.) [Dashed Box] Approximate Lease Boundary
- Base Sample - - - - - Underground Pipeline [Purple Box] Excavation to 2.5' depth (14,364 sq. ft.)
- ▲ Wall Sample [Green Box] Excavation to 3' depth (474 sq. ft.)
- [Pink Box] Excavation to 4' depth (1,254 sq. ft.)



0 12.5 25 50 ft.

Map Center:
 Lat: 32.272315,
 NAD 1983 UTM Zone 13N Long:-103.970366
 Date: Nov 01/22



**Confirmatory Schematic
 Papas Fritas 27 CTB 1**

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 image from Esri, 2018, Features from GPS survey, Vertex Professional Services, 2022.

Document Path: G:\11-Projects\US PROJECTS\Devon Energy Corporation\2022\22E-01417 -Papas Fritas 27 CTB -\Figure 1 Confirmatory Schematic Papas Fritas 27 CTB 1.mxd

ATTACHMENT 3

Company Contacts

Representative	Company	Telephone	E-mail
Wes Mathews	Devon Energy	575-578-6195	Wesley.Mathews@dvn.com
Bob Allen	SESI	575-397-0510	ballen@sesi-nm.com

Background

Safety and Environmental Solutions, Inc., hereinafter referred to as (SESI) was contracted by Devon Energy to assess a release at the Papas Fritas 27 CTB 1 location. This site is situated in UL O, Section 27, Township 23S and Range 29E, in Lea County New Mexico. We are addressing the release in this plan which will be remediated upon plan approval.

According to the NOR for incident NAPP2113158013, corrosion on a fitting resulted in the release of 150 bbls of produced water. A vacuum truck was dispatched and recovered 125 bbls free-standing fluid.

This workplan addresses two incident numbers, NAPP2113158013 & NAPP2127146416. This single event was documented or reported twice, one is a duplicate.

Surface and Ground Water

According to the NMOCD Oil and Gas Map, there is no surface water within 3,000 feet of this location and spill areas. Depth to groundwater determination was not successfully established based on the guidelines required by NMOCD; therefore, Devon will remediate these spills according to the most stringent criteria set forth by NMOCD in NMAC 19.15.29.

Characterization

The release has been fully delineated both vertically and horizontally, which includes establishing horizontal and vertical extent of delineation to the most stringent standard of 600 mg/kg chlorides, 100 mg/kg TPH, 50 mg/kg BTEX, and 10 mg/kg Benzene.

Release Area (NAPP2113158013), Investigation

SESI personnel tracked and mapped the release and sampled the area to achieve both vertical and horizontal delineation. Samples were taken at the surface and 1-foot intervals until field testing indicated the samples to meet target levels. The horizontal extent samples are denoted on the map with an H beside the sample number. The samples were properly preserved and packaged and sent to Hall Environmental Labs for testing. The results of the analytical are captured in the summary table below.

Table 2 – Field Test Samples

Sample ID	Chloride	TPH		Sample ID	Chloride	TPH
AH-1 @ Surf	NT	NT		AH-9 @ Surf	NT	NT
AH-1 @ 1'	2220	NT		AH-9 @ 1'	<108	07
AH-1 @ 2'	160	01				
				AH-10 @ Surf	NT	NT

AH-2 @ Surf	NT	NT		AH-10 @ 1'	1532	NT
AH-2 @ 1'	2604	NT		AH-10 @ 2'	220	12
AH-2 @ 2'	1648	NT		AH-11 @ Surf	NT	NT
AH-2 @ 3'	160	05		AH-11 @ 1'	1648	NT
				AH-11 @ 2'	108	04
AH-3 @ Surf	NT	NT				
AH-3 @ 1'	160	03		AH-12 @ Surf	NT	NT
				AH-12 @ 1'	1532	NT
				AH-12 @ 2'	188	10
AH-4 @ Surf	NT	NT				
AH-4 @ 1'	1648	NT		AH-13 @ Surf	NT	NT
AH-4 @ 2'	188	05		AH-13 @ 1'	1772	NT
				AH-13 @ 2'	220	09
AH-5 @ Surf	NT	NT				
AH-5 @ 1'	1772	NT		AH-14 @ Surf	NT	NT
AH-5 @ 2'	188	02		AH-14 @ 1'	1648	NT
				AH-14 @ 2'	<108	10
AH-6 @ Surf	NT	NT				
AH-6 @ 1'	<108	01		AH-15 @ Surf	NT	NT
				AH-15 @ 1'	2604	NT
AH-7 @ Surf	NT	NT		AH-15 @ 2'	<108	03
AH-7 @ 1'	1772	NT				
AH-7 @ 2'	188	07				
AH-8 @ Surf	NT	NT				
AH-8 @ 1'	1648	NT				
AH-8 @ 2'	252	04				
Horizontal Samples						
Sample ID	Chloride	TPH		Sample ID	Chloride	TPH
H-N Surf 1	<108	NT		H-S Surf	252	NT
H-N Surf 2	<108	NT		H-E Surf 1	108	NT
H-W Surf 1	<108	NT		H-E Surf 2	252	NT
H-W Surf 2	220	NT				
H-W Surf 3	220	NT				
H-W Surf 4	252	NT				

Release Area (NAPP2113158013), Action Plan

Based on the results above for vertical extent samples AH-1 through AH-15, SESI respectfully recommends the entire leak of release area be remediated to a depth of 2 to 3 foot where applicable. The excavation area is outlined in the map of this release located in this report. Once this remediation plan is approved, Devon will perform the remediation and all removed soil will be disposed of in an OCD-approved landfill. Devon will then conduct both bottom and sidewall confirmation sampling to ensure all contaminated materials have been removed to the most stringent criteria established by NMOCD. Upon receipt of lab results verifying all contaminants have been removed, Devon will backfill the site with uncontaminated soil. If it becomes apparent that facility equipment and/or structure integrity is compromised, SESI respectfully requests deferment of those areas until a later date. If this happens, pictures of the area of equipment/structures will be provided to provide evidence of deferral necessity.

Client Name: Devon Energy Production Company
 Site Name: Papas Fritas 27 CTB 1
 NMOCD Tracking #: nAPP2127146416
 Project #: 22E-01417
 Lab Report(s): 2210378, 2210428, 2210467, 2210780, 2210837, 2210A33, 2210B03, 2210E68

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				Chloride Concentration	
						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)
BES22-01	2	10/5/2022	0	-	76	ND	ND	ND	ND	ND	ND	ND	ND
BES22-02	2.5	10/19/2022	0	44	360	ND	ND	ND	ND	ND	ND	ND	ND
BES22-03	2	10/5/2022	0	23	75	ND	ND	ND	ND	ND	ND	ND	ND
BES22-04	2.5	10/19/2022	0	-	460	ND	ND	ND	ND	ND	ND	ND	ND
BES22-05	2.5	10/19/2022	0	-	457	ND	ND	ND	ND	ND	ND	ND	ND
BES22-06	2.5	10/19/2022	0	-	457	ND	ND	ND	ND	ND	ND	ND	ND
BES22-07	2.5	10/27/2022	0	-	602	ND	ND	ND	ND	ND	ND	ND	ND
BES22-08	2.5	10/19/2022	0	25	420	ND	ND	ND	ND	ND	ND	ND	ND
BES22-09	2.5	10/19/2022	0	-	512	ND	ND	ND	ND	ND	ND	ND	ND
BES22-10	2.5	10/19/2022	0	-	425	ND	ND	ND	ND	ND	ND	ND	ND
BES22-11	2.5	10/27/2022	0	30	227	ND	ND	ND	ND	ND	ND	ND	ND
BES22-12	2.5	10/19/2022	0	-	617	ND	ND	ND	ND	ND	ND	ND	ND
BES22-13	2.5	10/19/2022	0	15	505	ND	ND	ND	ND	ND	ND	ND	ND
BES22-14	2.5	10/19/2022	0	-	505	ND	ND	ND	ND	ND	ND	ND	ND
BES22-15	2.5	10/19/2022	0	-	235	ND	ND	ND	ND	ND	ND	ND	ND
BES22-16	2	10/5/2022	0	57	385	ND	ND	ND	ND	ND	ND	ND	170
BES22-17	2.5	10/19/2022	0	-	335	ND	ND	ND	ND	ND	ND	ND	ND
BES22-18	2	10/5/2022	0	-	53	ND	ND	ND	ND	ND	ND	ND	ND
BES22-19	2.5	10/19/2022	0	-	605	ND	ND	ND	ND	ND	ND	ND	ND
BES22-20	2	10/5/2022	0	-	158	ND	ND	ND	ND	ND	ND	ND	ND
BES22-21	2	10/5/2022	0	27	163	ND	ND	ND	ND	ND	ND	ND	160
BES22-22	2	10/5/2022	0	-	548	ND	ND	ND	ND	ND	ND	ND	250
BES22-23	2	10/5/2022	0	-	476	ND	ND	ND	ND	ND	ND	ND	1400
BES22-23	2.5	10/19/2022	0	-	257	ND	ND	ND	ND	ND	ND	ND	ND
BES22-24	2	10/5/2022	0	-	161	ND	ND	ND	ND	ND	ND	ND	ND
BES22-25	2.5	10/19/2022	0	-	532	ND	ND	ND	ND	ND	ND	ND	300
BES22-26	2.5	10/19/2022	0	5	608	ND	ND	ND	ND	ND	ND	ND	97
BES22-27	2.5	10/19/2022	0	-	700	ND	ND	ND	ND	ND	ND	ND	790
BES22-27	3	10/27/2022	0	-	325	ND	ND	ND	ND	ND	ND	ND	ND
BES22-28	2.5	10/18/2022	0	-	325	ND	ND	ND	ND	ND	ND	ND	ND
BES22-29	2.5	10/18/2022	0	-	650	ND	ND	ND	ND	ND	ND	ND	220
BES22-30	2.5	10/18/2022	0	26	285	ND	ND	ND	ND	ND	ND	ND	1600
BES22-30	3	10/27/2022	0	-	305	ND	ND	ND	ND	ND	ND	ND	ND
BES22-31	2.5	10/18/2022	0	-	390	ND	ND	ND	ND	ND	ND	ND	850
BES22-31	3	10/27/2022	0	-	387	ND	ND	ND	ND	ND	ND	ND	ND
BES22-32	2	10/5/2022	0	-	715	ND	ND	ND	ND	ND	ND	ND	210
BES22-33	2	10/5/2022	0	38	373	ND	ND	ND	ND	ND	ND	ND	190
BES22-34	2	10/5/2022	0	-	373	ND	ND	ND	ND	ND	ND	ND	420
BES22-35	2.5	10/18/2022	0	-	289	ND	ND	ND	ND	ND	ND	ND	ND
BES22-36	2.5	10/18/2022	0	-	302	ND	ND	ND	ND	ND	ND	ND	98
BES22-37	2.5	10/18/2022	0	-	267	ND	ND	ND	ND	ND	ND	ND	390
BES22-38	2.5	10/18/2022	0	75	405	ND	ND	ND	ND	ND	ND	ND	ND
BES22-39	2	10/5/2022	0	-	80	ND	ND	ND	ND	ND	ND	ND	ND
BES22-40	2	10/5/2022	0	-	20	ND	ND	ND	ND	ND	ND	ND	ND
BES22-41	2.5	10/18/2022	0	-	237	ND	ND	ND	ND	ND	ND	ND	ND
BES22-42	2.5	10/18/2022	0	-	285	ND	ND	ND	ND	ND	ND	ND	ND
BES22-43	2	10/5/2022	0	-	603	ND	ND	ND	ND	ND	ND	ND	580
BES22-44	2.5	10/18/2022	0	18	282	ND	ND	ND	ND	ND	ND	ND	ND
BES22-45	2	10/5/2022	0	-	425	ND	ND	ND	ND	ND	ND	ND	250
BES22-46	2	10/5/2022	0	29	118	ND	ND	ND	ND	ND	ND	ND	120
BES22-47	2	10/5/2022	0	-	379	ND	ND	ND	ND	ND	ND	ND	240
BES22-48	2.5	10/14/2022	0	-	320	ND	ND	ND	ND	ND	ND	ND	ND



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 (ppm)	Volatile		Extractable					Chloride Concentration (mg/kg)
						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)	
BES22-49	2.5	10/14/2022	0	-	582	ND	ND	ND	ND	ND	ND	ND	ND
BES22-50	2.5	10/14/2022	0	-	466	ND	ND	ND	ND	ND	ND	ND	ND
BES22-51	2.5	10/14/2022	0	-	397	ND	ND	ND	ND	ND	ND	ND	ND
BES22-52	2	10/14/2022	0	-	557	ND	ND	ND	ND	ND	ND	ND	ND
BES22-53	2.5	10/14/2022	0	-	388	ND	ND	ND	ND	ND	ND	ND	ND
BES22-54	2	10/14/2022	0	-	437	ND	ND	ND	ND	ND	ND	ND	ND
BES22-55	2.5	10/14/2022	0	-	356	ND	ND	ND	ND	ND	ND	ND	ND
BES22-56	2.5	10/14/2022	0	-	312	ND	ND	ND	ND	ND	ND	ND	ND
BES22-57	2.5	10/14/2022	0	-	318	ND	ND	ND	ND	ND	ND	ND	ND
BES22-58	2.5	10/14/2022	0	-	567	ND	ND	ND	ND	ND	ND	ND	ND
BES22-59	2.5	10/14/2022	0	-	486	ND	ND	ND	ND	ND	ND	ND	ND
BES22-60	2.5	10/14/2022	0	-	350	ND	ND	ND	ND	49	ND	49	ND
BES22-61	2.5	10/14/2022	0	-	260	ND	ND	ND	ND	ND	ND	ND	ND
BES22-62	2.5	10/14/2022	0	-	346	ND	ND	ND	ND	ND	ND	ND	ND
BES22-63	2.5	10/14/2022	0	-	321	ND	ND	ND	ND	ND	ND	ND	ND
BES22-64	2.5	10/14/2022	0	-	280	ND	ND	ND	ND	ND	ND	ND	ND
BES22-65	2	10/6/2022	0	-	213	ND	ND	ND	ND	ND	ND	ND	97
BES22-66	2.5	10/14/2022	0	-	272	ND	ND	ND	ND	ND	ND	ND	ND
BES22-67	2	10/6/2022	0	-	792	ND	ND	ND	ND	ND	ND	ND	450
BES22-67	2.5	10/14/2022	0	-	232	ND	ND	ND	ND	ND	ND	ND	ND
BES22-68	2.5	10/14/2022	0	-	481	ND	ND	ND	ND	ND	ND	ND	ND
BES22-69	2.5	10/14/2022	0	-	365	ND	ND	ND	ND	ND	ND	ND	ND
BES22-70	2	10/14/2022	0	58	589	ND	ND	ND	ND	ND	ND	ND	ND
BES22-71	2	10/14/2022	0	-	602	ND	ND	ND	ND	ND	ND	ND	ND
BES22-72	2	10/14/2022	0	-	489	ND	ND	ND	ND	ND	ND	ND	ND
BES22-73	2	10/14/2022	0	-	436	ND	ND	ND	ND	ND	ND	ND	ND
BES22-74	2	10/14/2022	0	-	505	ND	ND	ND	ND	ND	ND	ND	ND
BES22-75	2	10/14/2022	0	-	260	ND	ND	ND	ND	ND	ND	ND	ND
BES22-76	2	10/14/2022	0	-	382	ND	ND	ND	ND	ND	ND	ND	ND
BES22-77	2	10/14/2022	0	47	561	ND	ND	ND	ND	ND	ND	ND	ND
BES22-78	2	10/14/2022	0	-	477	ND	ND	ND	ND	ND	ND	ND	ND
BES22-79	2	10/14/2022	0	-	568	ND	ND	ND	ND	ND	ND	ND	ND
BES22-80	2	10/14/2022	0	-	529	ND	ND	ND	ND	ND	ND	ND	ND
BES22-81	2	10/14/2022	0	-	457	ND	ND	ND	ND	ND	ND	ND	ND
BES22-82	2	10/14/2022	0	92	228	ND	ND	ND	ND	ND	ND	ND	ND
BES22-83	2	10/14/2022	0	-	610	ND	ND	ND	ND	ND	ND	ND	ND
BES22-84	2	10/14/2022	0	-	720	ND	ND	ND	ND	ND	ND	ND	ND
BES22-85	2	10/6/2022	0	-	1,283	ND	ND	ND	ND	ND	ND	ND	ND
BES22-86	2	10/13/2022	0	18	342	ND	ND	ND	ND	ND	ND	ND	ND
BES22-87	2	10/13/2022	0	-	397	ND	ND	ND	ND	ND	ND	ND	ND
BES22-88	2	10/13/2022	0	-	485	ND	ND	ND	ND	ND	ND	ND	ND
BES22-89	2	10/13/2022	0	-	709	ND	ND	ND	ND	ND	ND	ND	ND
BES22-90	4	10/6/2022	0	1	38	ND	ND	ND	ND	ND	ND	ND	ND
BES22-91	2	10/13/2022	0	-	607	ND	ND	ND	ND	ND	ND	ND	ND
BES22-92	2	10/13/2022	0	48	590	ND	ND	ND	ND	ND	ND	ND	ND
BES22-93	2	10/13/2022	0	-	532	ND	ND	ND	ND	ND	ND	ND	ND
BES22-94	2	10/13/2022	0	61	246	ND	ND	ND	ND	ND	ND	ND	ND
BES22-95	4	10/6/2022	0	-	203	ND	ND	ND	ND	ND	ND	ND	90
BES22-96	4	10/6/2022	0	-	20	ND	ND	ND	ND	ND	ND	ND	ND
BES22-97	2	10/13/2022	0	-	435	ND	ND	ND	ND	ND	ND	ND	ND
BES22-98	2	10/13/2022	0	-	492	ND	ND	ND	ND	ND	ND	ND	ND
BES22-99	2	10/13/2022	0	-	460	ND	ND	ND	ND	ND	ND	ND	ND
BES22-100	2	10/13/2022	0	55	612	ND	ND	ND	ND	ND	ND	ND	ND
BES22-101	4	10/13/2022	0	-	612	ND	ND	ND	ND	ND	ND	ND	ND
BES22-102	4	10/6/2022	0	-	245	ND	ND	ND	ND	ND	ND	ND	180
BES22-103	2	10/13/2022	0	-	447	ND	ND	ND	ND	ND	ND	ND	ND
BES22-104	2	10/6/2022	0	-	493	ND	ND	ND	ND	ND	ND	ND	410



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 (ppm)	Volatile		Extractable					Chloride Concentration (mg/kg)
						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)	
BES22-105	2	10/13/2022	0	24	252	ND	ND	ND	ND	ND	ND	ND	ND
BES22-106	2	10/6/2022	0	5	355	ND	ND	ND	ND	ND	ND	ND	150
BES22-107	4	10/13/2022	0	-	481	ND	ND	ND	ND	ND	ND	ND	ND
BES22-108	4	10/6/2022	0	-	431	ND	ND	ND	ND	ND	ND	ND	210
BES22-109	2	10/6/2022	0	-	635	ND	ND	ND	ND	ND	ND	ND	400
BES22-110	2	10/13/2022	0	-	462	ND	ND	ND	ND	ND	ND	ND	ND
BES22-111	2	10/13/2022	0	-	477	ND	ND	ND	ND	ND	ND	ND	ND
BES22-112	2	10/13/2022	0	20	384	ND	ND	ND	ND	ND	ND	ND	ND
BES22-113	2	10/13/2022	0	-	440	ND	ND	ND	ND	ND	ND	ND	ND
WES22-01	1	10/7/2022	0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
WES22-02	1	10/7/2022	0	19	ND	ND	ND	ND	ND	ND	ND	ND	ND
WES22-03	1	10/19/2022	0	64	300	ND	ND	ND	ND	ND	ND	ND	ND
WES22-04	1	10/19/2022	0	-	429	ND	ND	ND	ND	ND	ND	ND	ND
WES22-05	1	10/19/2022	0	-	562	ND	ND	ND	ND	ND	ND	ND	ND
WES22-06	1	10/19/2022	0	-	605	ND	ND	ND	ND	ND	ND	ND	110
WES22-07	1	10/19/2022	0	-	622	ND	ND	ND	ND	ND	ND	ND	ND
WES22-08	1	10/18/2022	0	-	297	ND	ND	ND	ND	ND	ND	ND	ND
WES22-09	1	10/13/2022	0	-	372	ND	ND	ND	ND	ND	ND	ND	ND
WES22-10	1	10/18/2022	0	79	535	ND	ND	ND	ND	ND	ND	ND	760
WES22-10	1	10/27/2022	0	37	622	ND	ND	ND	ND	ND	ND	ND	ND
WES22-11	1	10/18/2022	0	-	345	ND	ND	ND	ND	ND	ND	ND	120
WES22-12	2	10/7/2022	0	28	ND	ND	ND	ND	ND	ND	ND	ND	ND
WES22-13	2	10/18/2022	0	-	190	ND	ND	ND	ND	ND	ND	ND	ND
WES22-14	2	10/18/2022	0	-	419	ND	ND	ND	ND	ND	ND	ND	160
WES22-15	1	10/18/2022	0	-	362	ND	ND	ND	ND	ND	ND	ND	66
WES22-16	1	10/18/2022	0	50	384	ND	ND	ND	ND	ND	ND	ND	130
WES22-17	1	10/7/2022	0	-	580	ND	ND	ND	ND	ND	ND	ND	350
WES22-18	1	10/18/2022	0	-	243	ND	ND	ND	ND	ND	ND	ND	180
WES22-19	1	10/19/2022	0	-	597	ND	ND	ND	ND	ND	ND	ND	89
WES22-20	1	10/7/2022	0	54	343	ND	ND	ND	ND	ND	ND	ND	330
WES22-21	1	10/7/2022	0	-	290	ND	ND	ND	ND	ND	ND	ND	ND
WES22-22	1	10/19/2022	0	-	245	ND	ND	ND	ND	ND	ND	ND	140
WES22-23	1	10/19/2022	0	17	352	ND	ND	ND	ND	ND	ND	ND	97
WES22-24	1	10/18/2022	0	-	371	ND	ND	ND	ND	ND	ND	ND	ND
WES22-25	1	10/19/2022	0	-	532	ND	ND	ND	ND	ND	ND	ND	110
WES22-26	1	10/19/2022	0	-	555	ND	ND	ND	ND	ND	ND	ND	ND
WES22-27	1	10/19/2022	0	64	428	ND	ND	ND	ND	ND	ND	ND	ND
WES22-28	1	10/19/2022	0	21	605	ND	ND	ND	ND	ND	ND	ND	ND
WES22-29	1	10/19/2022	0	-	490	ND	ND	ND	ND	ND	ND	ND	ND
WES22-30	1	10/7/2022	0	23	24	ND	ND	ND	ND	ND	ND	ND	110
WES22-31	1	10/19/2022	0	-	612	ND	ND	ND	ND	ND	ND	ND	ND
WES22-32	1	10/19/2022	0	-	540	ND	ND	ND	ND	ND	ND	ND	ND
WES22-33	1	10/19/2022	0	-	529	ND	ND	ND	ND	ND	ND	ND	ND
WES22-34	1	10/7/2022	0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
WES22-35	1	10/7/2022	0	-	20	ND	ND	ND	ND	ND	ND	ND	300

"ND" Not Detected at the Reporting Limit

"-" indicates not analyzed/assessed

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

Bold and green shaded indicates exceedance outside of NMOCD Reclamation Criteria (off-pad)



ATTACHMENT 4

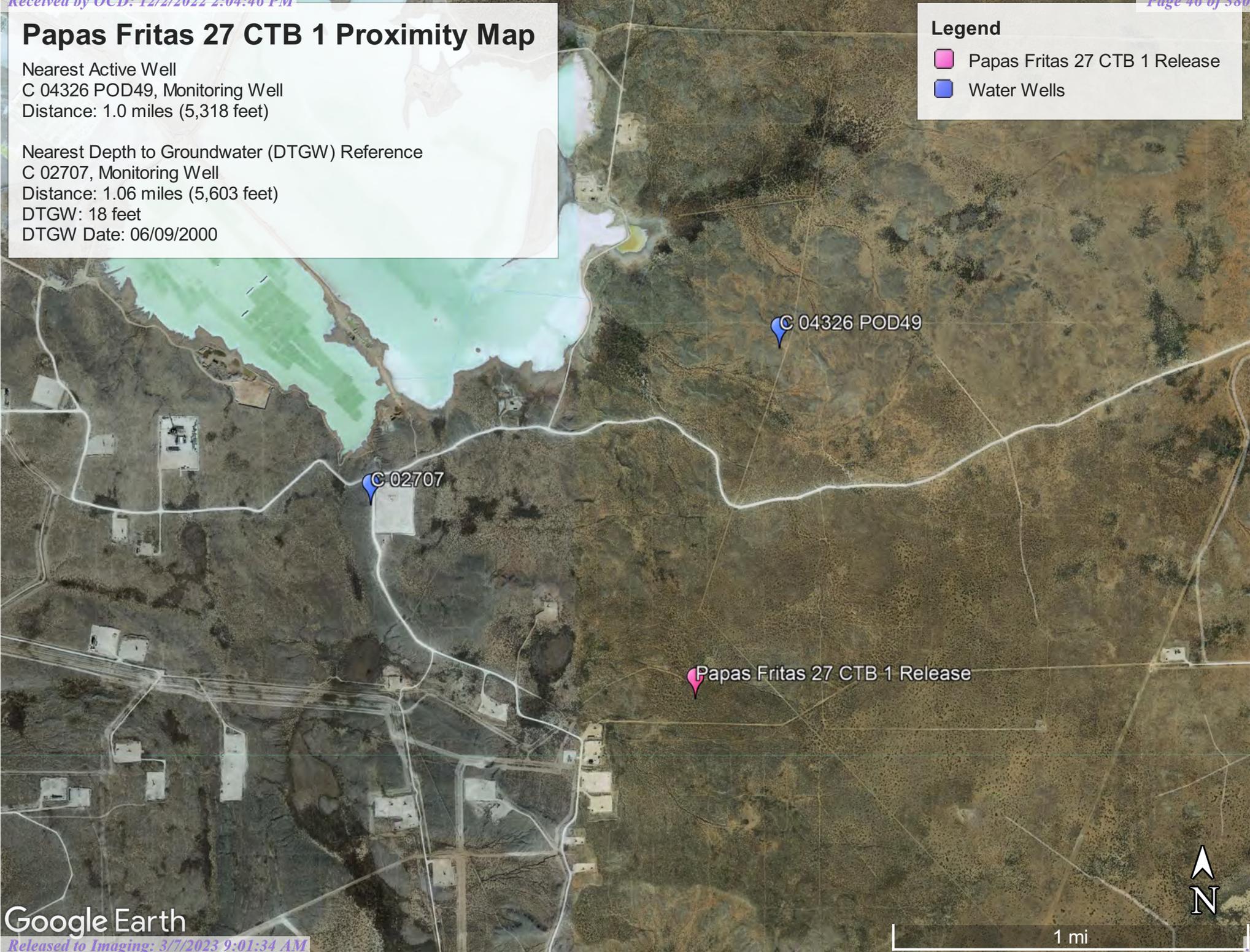
Papas Fritas 27 CTB 1 Proximity Map

Nearest Active Well
C 04326 POD49, Monitoring Well
Distance: 1.0 miles (5,318 feet)

Nearest Depth to Groundwater (DTGW) Reference
C 02707, Monitoring Well
Distance: 1.06 miles (5,603 feet)
DTGW: 18 feet
DTGW Date: 06/09/2000

Legend

- Papas Fritas 27 CTB 1 Release
- Water Wells





Intermittent 3,555 feet



May 3, 2022

Wetlands

- Estuarine and Marine Deepwater
- 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.

Pond 2,002 feet



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

May 3, 2022

Wetlands

- | | | | | | |
|---|--------------------------------|---|-----------------------------------|---|----------|
|  | Estuarine and Marine Deepwater |  | Freshwater Emergent Wetland |  | Lake |
|  | Estuarine and Marine Wetland |  | Freshwater Forested/Shrub Wetland |  | Other |
| | |  | Freshwater Pond |  | 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.

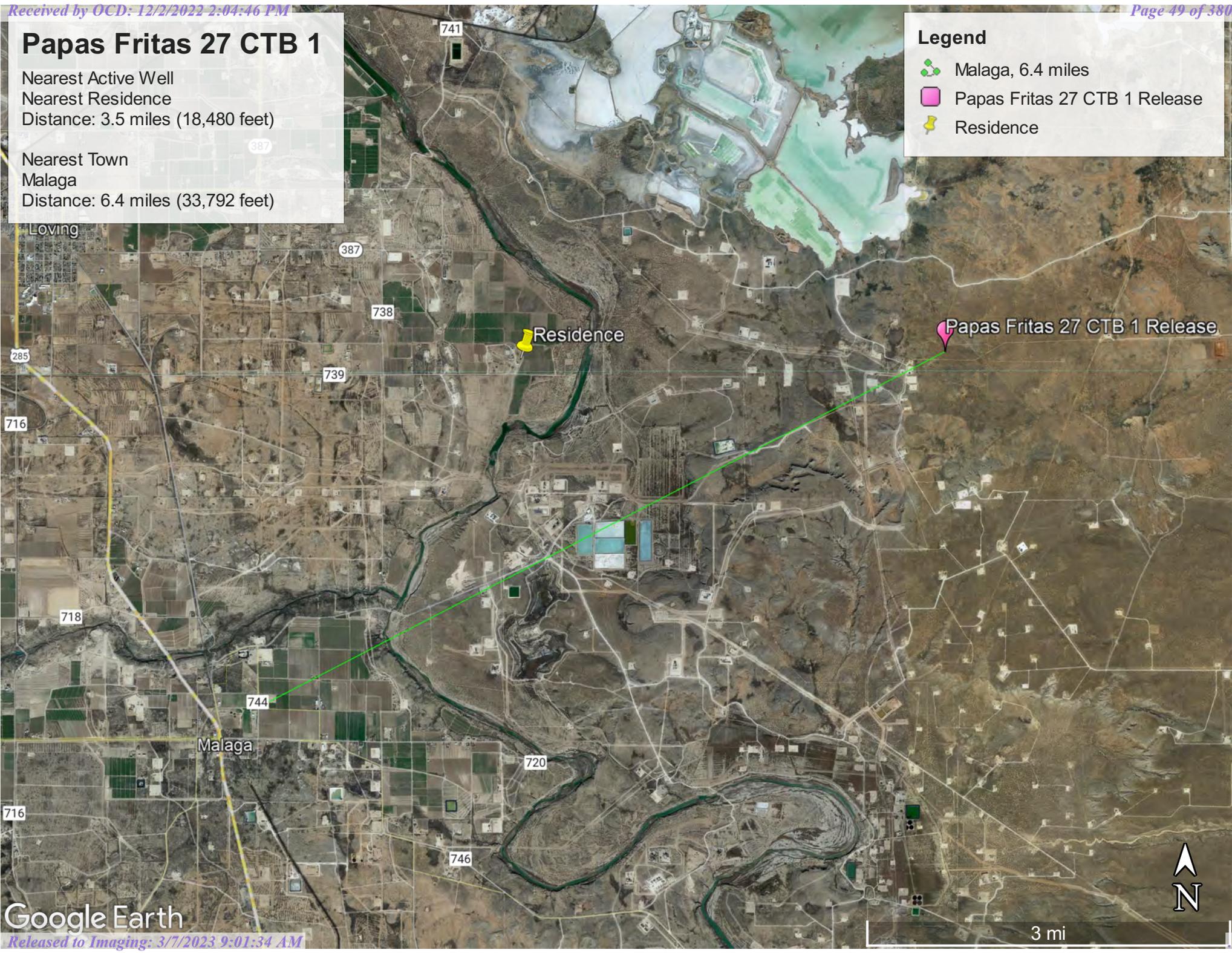
Papas Fritas 27 CTB 1

Nearest Active Well
Nearest Residence
Distance: 3.5 miles (18,480 feet)

Nearest Town
Malaga
Distance: 6.4 miles (33,792 feet)

Legend

- Malaga, 6.4 miles
- Papas Fritas 27 CTB 1 Release
- Residence



3 mi



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	Tws	Rng	X	Y
NA	C 04326 POD49	2	4	3	23	23S	29E	597378	3572591

x

Driller License:

Driller Company:

Driller Name:

Drill Start Date:

Drill Finish Date:

Plug Date:

Log File Date:

PCW Rev Date:

Source:

Pump Type:

Pipe Discharge Size:

Estimated Yield:

Casing Size:

Depth Well:

Depth Water:

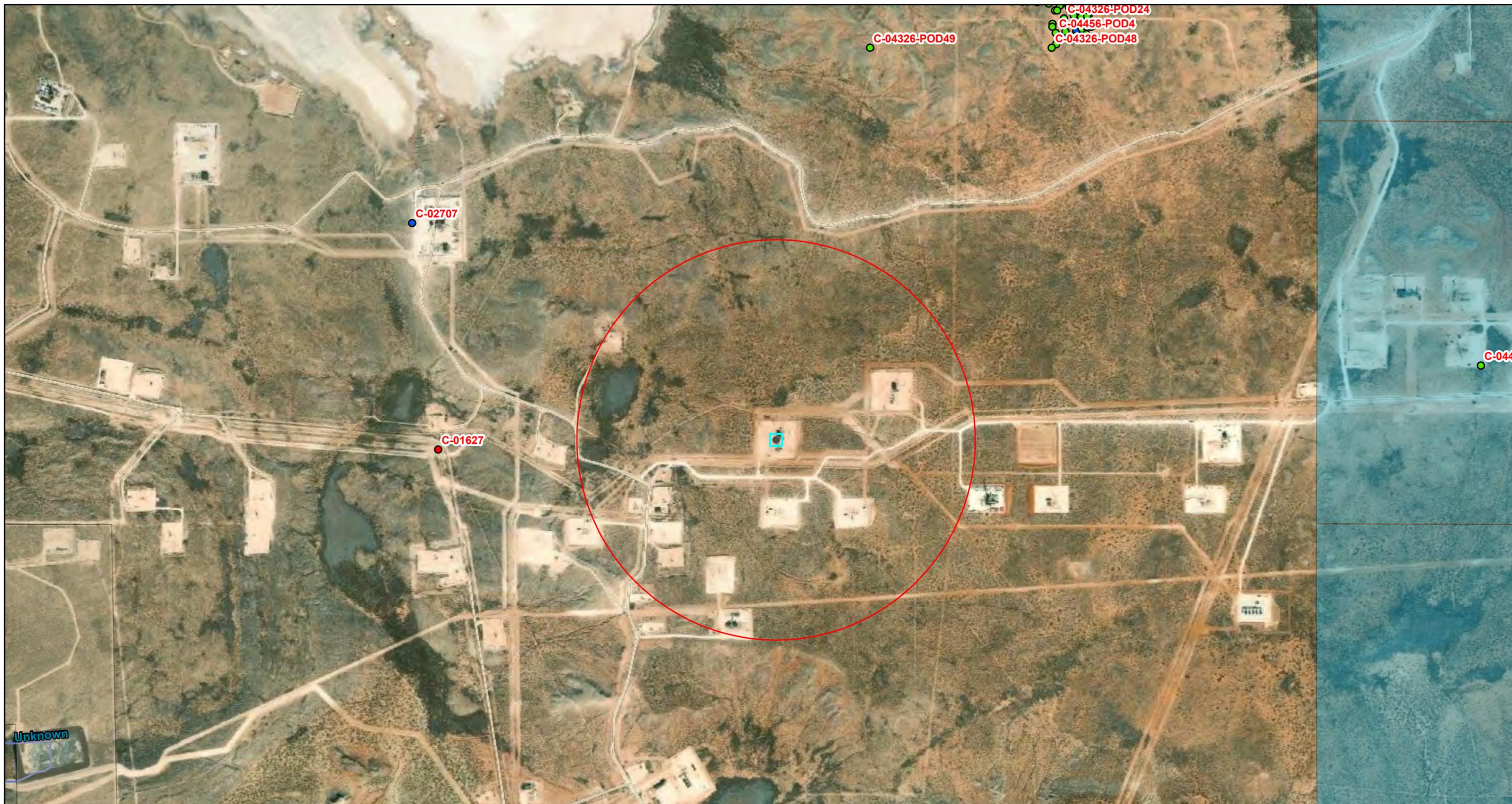
x

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.

5/3/22 1:45 PM

POINT OF DIVERSION SUMMARY

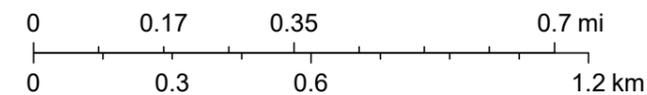
OSE POD Locations 0.5 mile



5/3/2022, 1:39:38 PM

1:18,056

- GIS WATERS PODs
- Active
 - Pending
 - Plugged
- OSE District Boundary
- New Mexico State Trust Lands
 - Subsurface Estate
 - Both Estates
- Conveyances
- Ditch
 - SiteBoundaries



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community, Esri, HERE, Garmin, (c) OpenStreetMap contributors, Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community, U.S. Department of Energy Office of Legacy



New Mexico Office of the State Engineer

Water Right Summary



[get image list](#)

WR File Number: C 02707

Subbasin: C

Cross Reference: -

Primary Purpose:

Primary Status: PMT PERMIT

Total Acres:

Subfile: -

Header: -

Total Diversion: 0

Cause/Case: -

Owner: IMC KALIUM

Contact: SCOTT VAIL

Documents on File

Trn #	Doc	File/Act	Status		Transaction Desc.	From/		Acres	Diversion	Consumptive
			1	2		To				
get images 466312	72121	2000-05-15	PMT	LOG	C 02707	T			3	

Current Points of Diversion

POD Number	Well Tag	Source	Q				(NAD83 UTM in meters)		Other Location Desc
			64Q16Q4Sec	Tws	Rng	X	Y		
C 02707		Shallow	2	28	23S	29E	595535	3571868*	

An () after northing value indicates UTM location was derived from PLSS - see Help

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.

5/3/22 1:59 PM

WATER RIGHT SUMMARY



New Mexico Office of the State Engineer

Water Right Summary



[get image list](#)

WR File Number: C 04326 **Subbasin:** CUB **Cross Reference:** -

Primary Purpose: MON MONITORING WELL

Primary Status: PMT PERMIT

Total Acres: **Subfile:** - **Header:** -

Total Diversion: 0 **Cause/Case:** -

Agent: LT ENVIRONMENTAL INC

Contact: STUART HYDE, LG

User: XTO ENERGY INC

Contact: KYLE LITTRELL

Documents on File

	Trn #	Doc	File/Act	Status			Transaction Desc.	From/		Acres	Diversion	Consumptive
				1	2			To				
get images	684112	EXPL	2020-12-28	PMT	APR		C 04326 POD47-53	T		0	0	
get images	681901	EXPL	2020-11-18	PMT	APR		C 04326 POD46	T		0	0	
get images	668116	EXPL	2020-02-24	PMT	APR		C 04326 POD44-45	T		0	0	
get images	663909	EXPL	2020-01-02	PMT	APR		C 04326 POD40-43	T		0	0	
get images	661556	EXPL	2019-10-29	PMT	APR		C 04326 POD30-39	T		0	0	
get images	658978	EXPL	2019-09-20	PMT	APR		C 04326 POD17-29	T		0	0	
get images	648985	EXPL	2019-05-08	PMT	LOG		C 04326 POD1-16	T		0	0	

Current Points of Diversion

(NAD83 UTM in meters)

POD Number	Well Tag	Source	Q					X	Y	Other Location Desc	
			64	Q16	Q4	Sec	Tw				Rng
C 04326 POD1	NA		1	2	3	23	23S	29E	598125	3572992	BH01
C 04326 POD10	NA		4	2	3	23	23S	29E	598170	3572882	BH10
C 04326 POD11	NA		4	2	3	23	23S	29E	598221	3572827	BH11
C 04326 POD12	NA		4	2	3	23	23S	29E	598229	3572790	BH12
C 04326 POD13	NA		4	2	3	23	23S	29E	598250	3572791	BH13
C 04326 POD14	NA	Shallow	4	2	3	23	23S	29E	598191	3572765	BH14
C 04326 POD15	NA		2	4	3	23	23S	29E	598202	3572692	BH15
C 04326 POD16	NA	Shallow	2	4	3	23	23S	29E	598209	3572664	BH16
C 04326 POD17	NA		4	2	3	23	23S	29E	598198	3572729	BH17
C 04326 POD18	NA		4	2	3	23	23S	29E	598169	3572792	BH18
C 04326 POD19	NA		2	4	3	23	23S	29E	598233	3572673	BH19
C 04326 POD2	NA		1	2	3	23	23S	29E	598156	3572980	BH02
C 04326 POD20	NA		2	4	3	23	23S	29E	598250	3572684	BH20
C 04326 POD21	NA		2	4	3	23	23S	29E	598250	3572654	BH21
C 04326 POD22	NA		4	2	3	23	23S	29E	598229	3572722	BH22
C 04326 POD23	NA		1	4	3	23	23S	29E	598166	3572662	BH23
C 04326 POD24	NA		3	2	3	23	23S	29E	598160	3572716	BH24
C 04326 POD25	NA		3	2	3	23	23S	29E	598124	3572747	BH25

C 04326 POD26	NA	4	2	3	23	23S	29E	598193	3572746	 RW01/BH26
C 04326 POD27	NA	2	4	3	23	23S	29E	598272	3572684	 MW01
C 04326 POD28	NA	2	4	3	23	23S	29E	598205	3572644	 MW02
C 04326 POD29	NA	3	2	3	23	23S	29E	598145	3572769	 MW03
C 04326 POD3	NA	1	2	3	23	23S	29E	598156	3572962	 BH03
C 04326 POD30	NA	4	2	3	23	23S	29E	598178	3572763	 BH-27
C 04326 POD31	NA	4	2	3	23	23S	29E	598259	3572726	 BH-28
C 04326 POD32	NA	4	2	3	23	23S	29E	598253	3572726	 BH-29
C 04326 POD33	NA	4	2	3	23	23S	29E	598253	3572750	 BH-30
C 04326 POD34	NA	2	4	3	23	23S	29E	598266	3572696	 BH-31
C 04326 POD35	NA	3	2	3	23	23S	29E	598142	3572767	 BH-35
C 04326 POD36	NA	4	2	3	23	23S	29E	598256	3572777	 BH-33
C 04326 POD37	NA	4	2	3	23	23S	29E	598282	3572751	 BH-34
C 04326 POD38	NA	2	4	3	23	23S	29E	598217	3572633	 BH-35
C 04326 POD39	NA	2	4	3	23	23S	29E	598266	3572683	 BH-36
C 04326 POD4	NA	1	2	3	23	23S	29E	598136	3572962	 BH04
C 04326 POD40	NA		2	3	23	23S	29E	598115	3572815	 BH-37
C 04326 POD41	NA		2	3	23	23S	29E	598098	3572775	 BH-38
C 04326 POD42	NA		2	3	23	23S	29E	598113	3572694	 BH-39
C 04326 POD43	NA		2	3	23	23S	29E	598154	3572971	 BH-40
C 04326 POD44	NA	3	2	3	23	23S	29E	598050	3572781	 BH-49
C 04326 POD45	NA	3	2	3	23	23S	29E	598096	3572822	 BH-50
C 04326 POD46	NA	3	2	3	23	23S	29E	598132	3572748	 BH61
C 04326 POD47	NA	1	4	3	23	23S	29E	598129	3572612	 BH54
C 04326 POD48	NA	1	4	3	23	23S	29E	598111	3572597	 BH55
C 04326 POD49	NA	2	4	3	23	23S	29E	597378	3572591	 BH56
C 04326 POD5	NA	2	2	3	23	23S	29E	598170	3572940	 BH05
C 04326 POD50	NA	3	2	3	23	23S	29E	597992	3572782	 BH57
C 04326 POD51	NA	3	2	3	23	23S	29E	598035	3572817	 BH58
C 04326 POD52	NA	4	2	3	23	23S	29E	598367	3572767	 BH59
C 04326 POD53	NA	4	2	3	23	23S	29E	598326	3572820	 BH60
C 04326 POD6	NA	1	2	3	23	23S	29E	598125	3572940	 BH06
C 04326 POD7	NA	3	2	3	23	23S	29E	598157	3572894	 BH07
C 04326 POD8	NA	3	2	3	23	23S	29E	598097	3572884	 BH08
C 04326 POD9	NA	3	2	3	23	23S	29E	598136	3572873	 BH09

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.

5/3/22 1:46 PM

WATER RIGHT SUMMARY



New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

WR File Nbr	(acre ft per annum)				County	POD Number	Well Tag	Code	Grant	(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest)					(NAD83 UTM in meters)		Distance			
	Sub basin	Use	Diversion	Owner						q	q	q	q	Sec	Tw	Rng		X	Y	
C 01090	CUB	EXP	0	VALLEY LAND COMPANY	ED	C 01090	6416	4				2	2	06	24S	29E	592563	3568831*		4955
C 01091	CUB	EXP	0	VALLEY LAND CO.	ED	C 01091						2	2	06	24S	29E	592563	3568831*		4955
C 01217	CUB	COM	150	INTREPID MINING NM LLC US BANK NATIONAL ASSOCIATION	ED	C 01217 S	Shallow	4	1	4	16	23S	29E				595413	3574403*		3750
C 01627	C	PRO	0	EXXON CORPORATION	ED	C 01627		1	4	4	28	23S	29E				595649	3570959*		1364
C 02012	C	STK	3	HENRY H GRANDI	ED	C 02012						3	16	23S	29E		594705	3574293*		4012
C 02182	C	PRO	0	SANTA FE ENERGY	ED	C 02182	Shallow					4	30	23S	29E		592328	3571048*		4685
C 02486	C	PRO	0	TEXACO EXPLORATION & PROD.	ED	C 02486		3	2	3	19	23S	30E				601304	3572832*		4661
C 02500	CUB	EXP	0	UNITED SALT CORPORATION	ED	C 02500		4	3	2	17	23S	29E				593800	3574791*		4961
C 02608	CUB	EXP	0	UNITED SALT CORPORATION	ED	C 02608	Shallow	3	1	4	17	23S	29E				593598	3574387*		4802
C 02613	CUB	EXP	0	UNITED SALT CORPORATION	ED	C 02613		4	4	2	20	23S	29E				594203	3573176*		3547
C 02622	CUB	COM	0	UNITED SALT CORPORATION	ED	C 01217 S	Shallow	4	1	4	16	23S	29E				595413	3574403*		3750
C 02707	C		0	IMC KALIUM	ED	C 02707	Shallow					2	28	23S	29E		595535	3571868*		1708
C 02715	CUB	MON	0	UNITED SALT CORPORATION	ED	C 02715		4	1	3	15	23S	29E				596221	3574411*		3491
C 02716	CUB	MON	0	UNITED SALT CORPORATION	ED	C 02716		4	4	4	16	23S	29E				595818	3574002*		3220
C 02717	CUB	MON	0	UNITED SALT CORPORATION	ED	C 02717		4	2	4	16	23S	29E				595817	3574407*		3600
C 02718	CUB	MON	0	UNITED SALT CORPORATION	ED	C 02718		4	4	2	16	23S	29E				595816	3574812*		3985
C 02720	CUB	MON	0	JOHN WOZNICWICZ	ED	C 02720						2	1	21	23S	29E	594911	3573690*		3405
C 02721	CUB	MON	0	JOHN WOZNICWICZ	ED	C 02721						2	3	21	23S	29E	594915	3572879*		2809
C 02794	CUB	MON	0	IMC	ED	C 02794		4	3	10	23S	29E					596518	3575731*		4745
C 02795	CUB	MON	0	IMC	ED	C 02795		4	3	10	23S	29E					596518	3575731*		4745
C 02797	CUB	MON	0	IMC	ED	C 02797						2	3	22	23S	29E	596540	3572895*		1942
C 02808	CUB	MON	0	IMC	ED	C 02808						2	3	16	23S	29E	594909	3574501*		4075
C 02809	CUB	MON	0	IMC	ED	C 02809						2	3	16	23S	29E	594909	3574501*		4075
C 03057	CUB	EXP	0	UNITED SALT CORPORATION	ED	C 03057 EXPLORE		4	1	1	21	23S	29E				594605	3573586*		3525
C 03058	CUB		0	UNITED SALT CORPORATION	ED	C 03058 EXPLORE		4	1	1	16	23S	29E				594605	3575206*		4836
C 03377	C	STK	3	B F & G FARMS	ED	C 03377 POD1		3	3	2	29	23S	29E				593596	3571587		3465
C 03587	CUB	MON	0	MOSAIC POTASH CARLSBAD INC	ED	C 03587 POD1	Shallow	1	4	3	29	23S	29E				593337	3570754		3684
C 04326	CUB	MON	0	LT ENVIRONMENTAL INC	ED	C 04326 POD1		1	2	3	23	23S	29E				598124	3572992		2272
					ED	C 04326 POD10		4	2	3	23	23S	29E				598170	3572882		2200
					ED	C 04326 POD11		4	2	3	23	23S	29E				598220	3572827		2181
					ED	C 04326 POD12		4	2	3	23	23S	29E				598228	3572790		2155
					ED	C 04326 POD13		4	2	3	23	23S	29E				598249	3572791		2167
					ED	C 04326 POD14	Shallow	4	2	3	23	23S	29E				598190	3572765		2113
					ED	C 04326 POD15		2	4	3	23	23S	29E				598202	3572692		2059
					ED	C 04326 POD16	Shallow	2	4	3	23	23S	29E				598209	3572664		2040
					ED	C 04326 POD17		4	2	3	23	23S	29E				598198	3572729		2087
					ED	C 04326 POD18		4	2	3	23	23S	29E				598168	3572792		2123
					ED	C 04326 POD19		2	4	3	23	23S	29E				598232	3572673		2062
					ED	C 04326 POD2		1	2	3	23	23S	29E				598156	3572980		2277
					ED	C 04326 POD20		2	4	3	23	23S	29E				598249	3572684		2080
					ED	C 04326 POD21		2	4	3	23	23S	29E				598250	3572654		2056
					ED	C 04326 POD22		4	2	3	23	23S	29E				598228	3572722		2099
					ED	C 04326 POD23		1	4	3	23	23S	29E				598166	3572662		2014
					ED	C 04326 POD24		3	2	3	23	23S	29E				598160	3572716		2055
					ED	C 04326 POD25		3	2	3	23	23S	29E				598123	3572747		2061
					ED	C 04326 POD26		4	2	3	23	23S	29E				598193	3572746		2099
					ED	C 04326 POD27		2	4	3	23	23S	29E				598272	3572684		2094
					ED	C 04326 POD28		2	4	3	23	23S	29E				598204	3572644		2022
					ED	C 04326 POD29		3	2	3	23	23S	29E				598145	3572769		2091

			ED	C 04326 POD3		1	2	3	23	23S	29E	598156			
			ED	C 04326 POD30		4	2	3	23	23S	29E	598177	3572763		2104
			ED	C 04326 POD31		4	2	3	23	23S	29E	598258	3572726		2120
			ED	C 04326 POD32		4	2	3	23	23S	29E	598253	3572726		2116
			ED	C 04326 POD33		4	2	3	23	23S	29E	598253	3572750		2136
			ED	C 04326 POD34		2	4	3	23	23S	29E	598265	3572696		2099
			ED	C 04326 POD35		3	2	3	23	23S	29E	598142	3572767		2088
			ED	C 04326 POD36		4	2	3	23	23S	29E	598256	3572777		2160
			ED	C 04326 POD37		4	2	3	23	23S	29E	598282	3572751		2154
			ED	C 04326 POD38		2	4	3	23	23S	29E	598216	3572633		2019
			ED	C 04326 POD39		2	4	3	23	23S	29E	598266	3572683		2090
			ED	C 04326 POD4		1	2	3	23	23S	29E	598135	3572962		2251
			ED	C 04326 POD40			2	3	23	23S	29E	598114	3572815		2114
			ED	C 04326 POD41			2	3	23	23S	29E	598097	3572775		2071
			ED	C 04326 POD42			2	3	23	23S	29E	598113	3572694		2010
			ED	C 04326 POD43			2	3	23	23S	29E	598153	3572971		2267
			ED	C 04326 POD44		3	2	3	23	23S	29E	598050	3572781		2051
			ED	C 04326 POD45		3	2	3	23	23S	29E	598095	3572822		2110
			ED	C 04326 POD46		3	2	3	23	23S	29E	598131	3572748		2066
			ED	C 04326 POD47		1	4	3	23	23S	29E	598128	3572612		1951
			ED	C 04326 POD48		1	4	3	23	23S	29E	598111	3572597		1929
			ED	C 04326 POD49		2	4	3	23	23S	29E	597378	3572591		1621
			ED	C 04326 POD5		2	2	3	23	23S	29E	598169	3572940		2249
			ED	C 04326 POD50		3	2	3	23	23S	29E	597992	3572782		2023
			ED	C 04326 POD51		3	2	3	23	23S	29E	598034	3572817		2075
			ED	C 04326 POD52		4	2	3	23	23S	29E	598366	3572767		2218
			ED	C 04326 POD53		4	2	3	23	23S	29E	598325	3572820		2235
			ED	C 04326 POD6		1	2	3	23	23S	29E	598125	3572940		2227
			ED	C 04326 POD7		3	2	3	23	23S	29E	598157	3572894		2203
			ED	C 04326 POD8		3	2	3	23	23S	29E	598097	3572884		2164
			ED	C 04326 POD9		3	2	3	23	23S	29E	598136	3572873		2175
C 04456	CUB MON	0 XTO ENERGY INC	ED	C 04456 POD1	NA	1	4	3	23	23S	29E	598112	3572682		2000
			ED	C 04456 POD2		3	2	3	23	23S	29E	598103	3572791		2087
			ED	C 04456 POD3		3	2	3	23	23S	29E	598134	3572815		2124
			ED	C 04456 POD4		1	4	1	23	23S	29E	598126	3572657		1987
C 04481	CUB GEO	0 XCEL ENERGY	ED	C 04481 POD1	NA	1	3	4	03	24S	29E	596798	3567778		3239
			ED	C 04481 POD2		1	3	4	03	24S	29E	596851	3567748		3266
			ED	C 04481 POD3		2	4	3	03	24S	29E	596798	3567778		3239
			ED	C 04481 POD4		2	4	3	03	24S	29E	596747	3567685		3335
			ED	C 04481 POD5		2	4	3	03	24S	29E	596746	3567747		3274
			ED	C 04481 POD6		2	4	3	03	24S	29E	596747	3567654		3366
			ED	C 04481 POD7		2	4	3	03	14S	29E	596800	3567655		3362
			ED	C 04481 POD8		1	3	4	03	24S	29E	596852	3567655		3358
C 04494	CUB MON	0 LT ENVIRONMENTAL INC	ED	C 04494 POD1	NA	2	2	3	25	23S	29E	599857	3571337		2862
C 04597	CUB MON	0 XTO ENERGY INC	ED	C 04597 POD1	NA	1	1	4	24	23S	29E	600124	3573002		3694
			ED	C 04597 POD10		3	1	4	24	23S	29E	600145	3572875		3645
			ED	C 04597 POD11		4	1	4	24	23S	29E	600606	3572878		4049
			ED	C 04597 POD12		4	1	4	24	23S	29E	600188	3572860		3674
			ED	C 04597 POD2		1	1	4	24	23S	29E	600122	3572959		3669
			ED	C 04597 POD3		1	1	4	24	23S	29E	600171	3572991		3727
			ED	C 04597 POD4		1	1	4	24	23S	29E	600158	3572947		3693
			ED	C 04597 POD5		2	1	4	24	23S	29E	600198	3572931		3719
			ED	C 04597 POD6		4	1	4	24	23S	29E	600221	3572917		3732
			ED	C 04597 POD7		4	1	4	24	23S	29E	600213	3572893		3712
			ED	C 04597 POD9		3	1	4	24	23S	29E	600173	3572902		3682

UTM/NAID83 Radius Search (in meters):

Easting (X): 597013

Northing (Y): 3571011

Radius: 5000

Sorted by: File Number

*UTM location was derived from PLSS - see Help

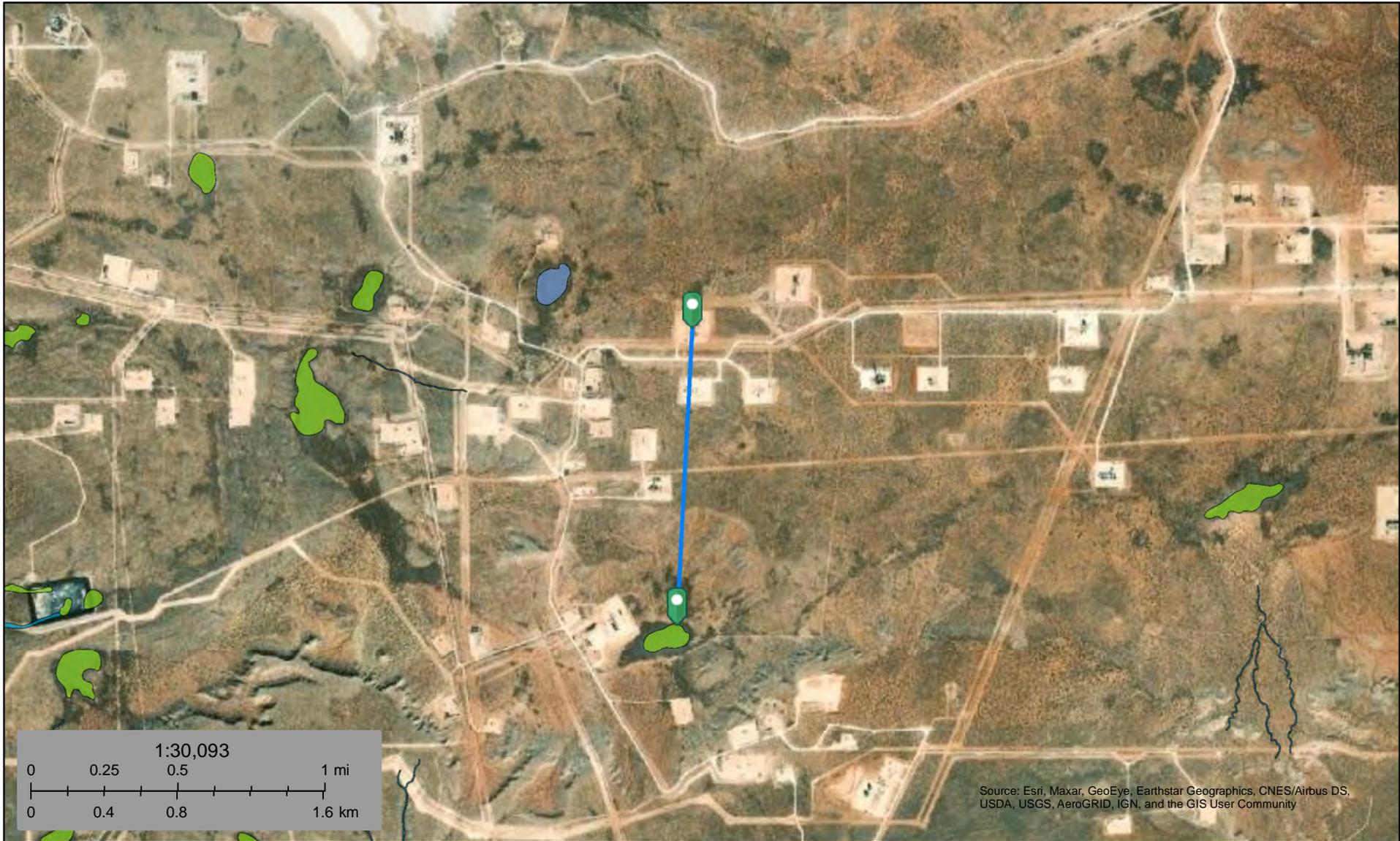
The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

5/3/22 1:24 PM

ACTIVE & INACTIVE POINTS OF DIVERSION



Wetland 4,486 feet



May 3, 2022

Wetlands

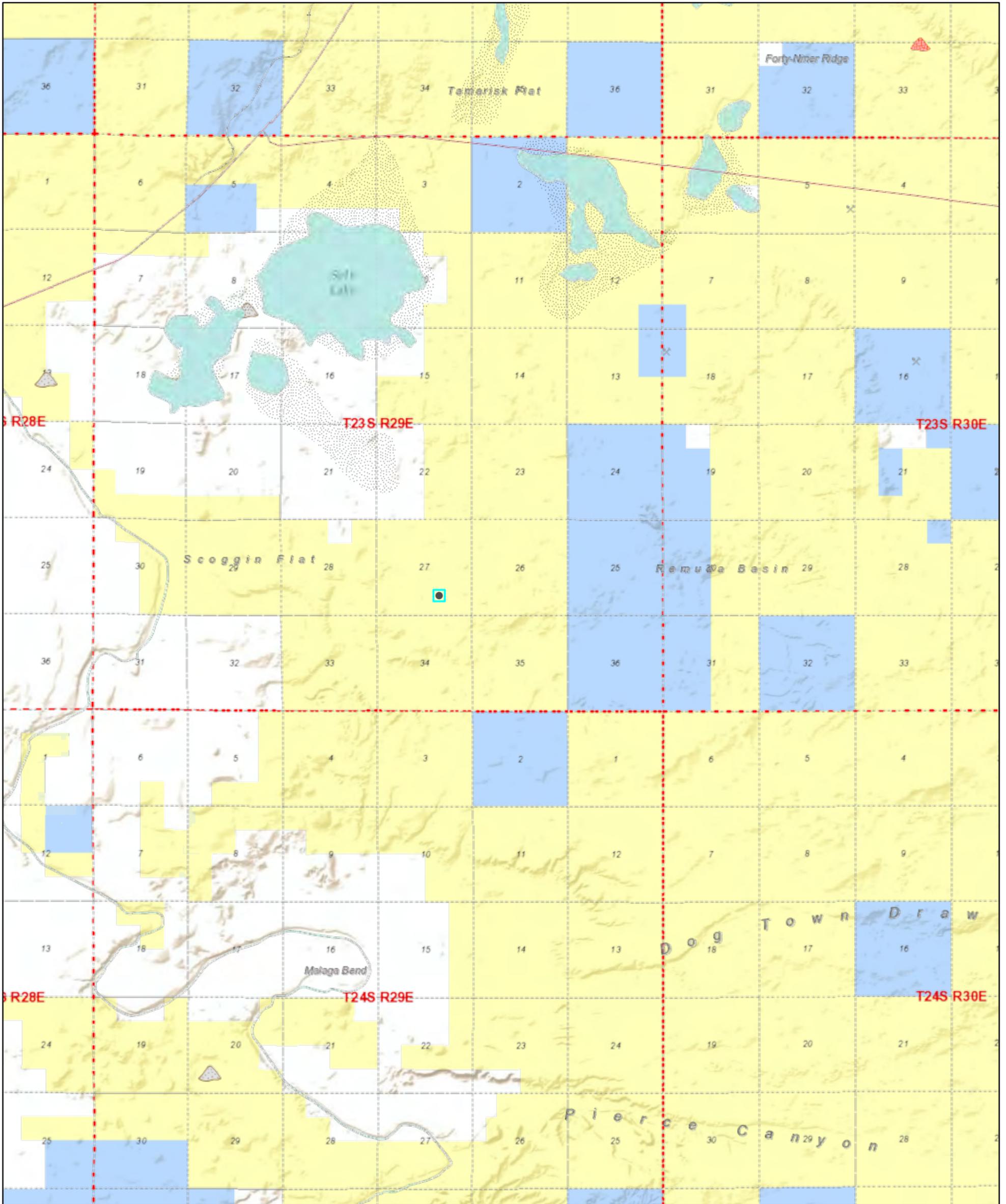
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland

- 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.

Active Mines in New Mexico



5/3/2022, 4:29:28 PM

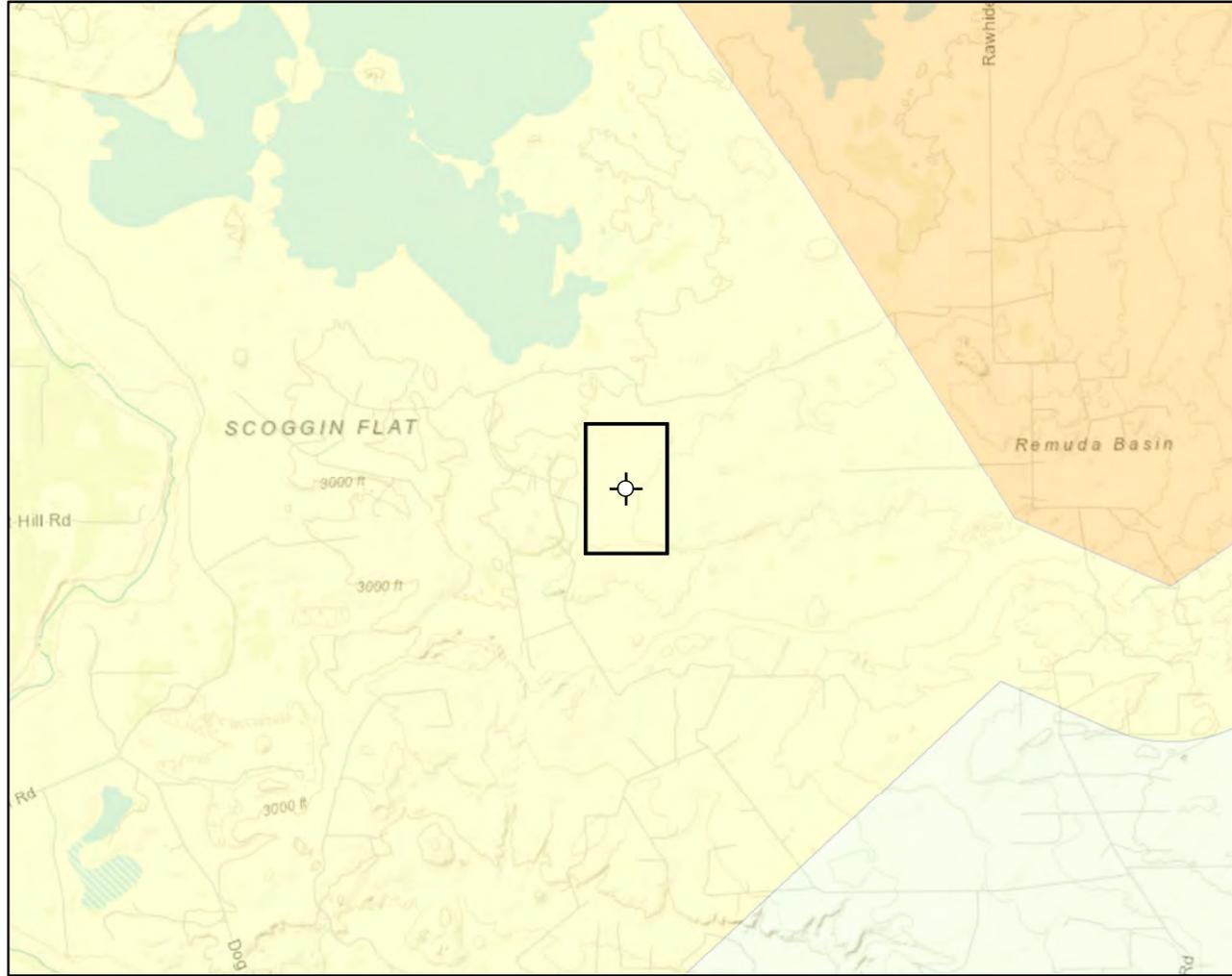
- Township / Range
- Sections
- Land Ownership**
- Bureau of Land Management
- Bureau of Reclamation
- Department of Agriculture
- Department of Defense
- Department of Energy
- National Park Service
- Private Land
- State Game and Fish
- State Land
- State Parks
- Tribal
- US Fish and Wildlife Service
- US Forest Service
- Registered Mines**
- X Aggregate, Stone etc.
- ▲ Potash
- ▲ Salt

1:72,224



U.S. Bureau of Land Management - New Mexico State Office, Sources: Esri, USGS, NOAA, Sources: Esri, Garmin, USGS, NPS

Document Path: G:\Projects\US PROJECTS\Devon Energy Corporation\2022\22E-01417 - Papa Fritas 27 CTB - 1\Figure X Karst Potential Papas Fritas 27 CTB 1.mxd



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

0 250 500 ft.



Map Center:
Lat/Long: 32.271636, -103.969991

NAD 1983 UTM Zone 13N
Date: May 05/22



**Karst Potential
Papas Fritas 27 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 2021; 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



103°58'30"W 32°16'33"N



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, A99
 - With BFE or Depth Zone AE, AO, AH, VE, AR
 - Regulatory Floodway
 - OTHER AREAS OF FLOOD HAZARD**
 - 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
 - Future Conditions 1% Annual Chance Flood Hazard Zone X
 - Area with Reduced Flood Risk due to Levee. See Notes. Zone X
 - Area with Flood Risk due to Levee Zone D
 - OTHER AREAS**
 - NO SCREEN Area of Minimal Flood Hazard Zone X
 - Effective LOMRs
 - Area of Undetermined Flood Hazard Zone D
 - GENERAL STRUCTURES**
 - 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.

0 250 500 1,000 1,500 2,000 Feet 1:6,000 103°57'53"W 32°16'3"N

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

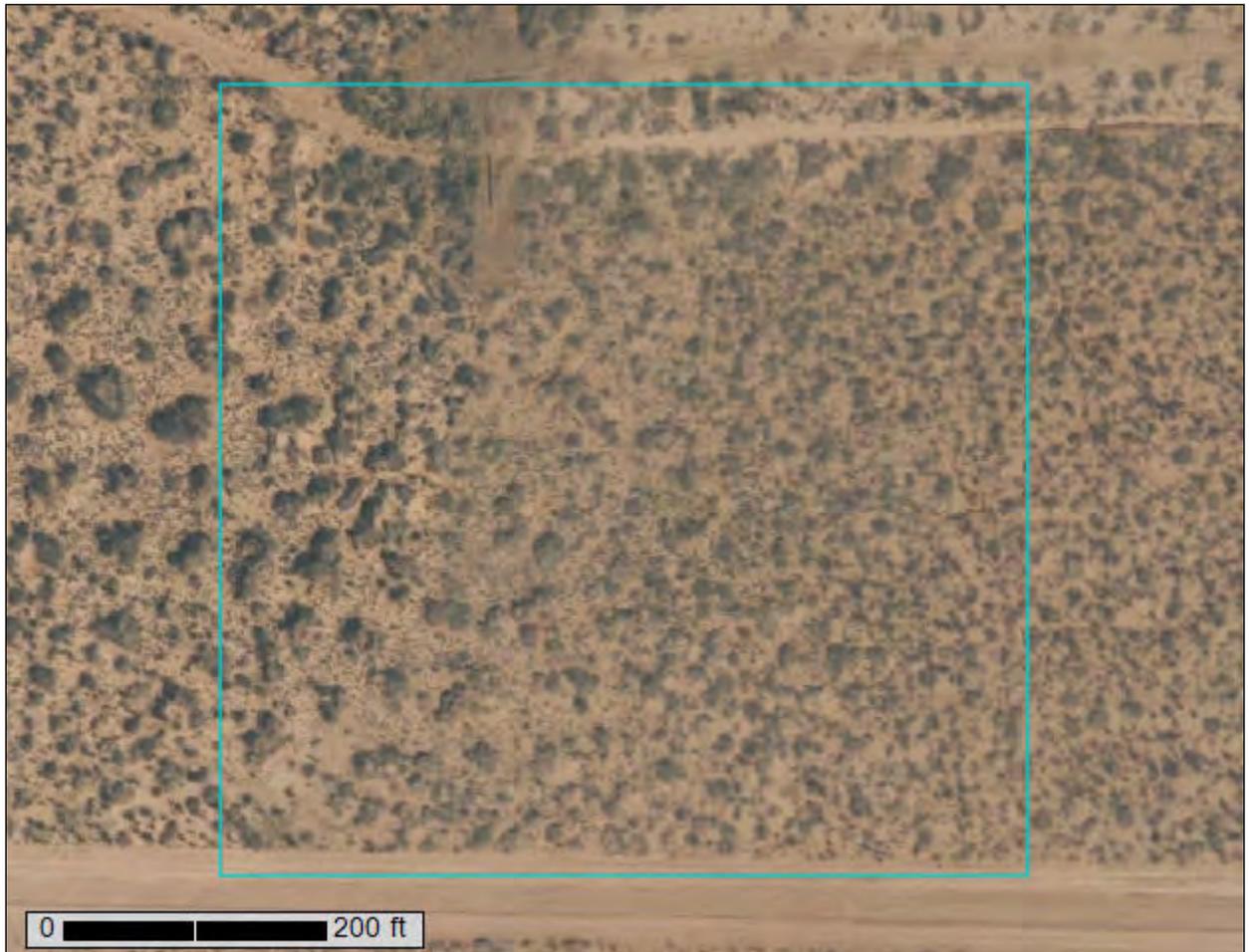
The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 5/3/2022 at 6:33 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new 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.



A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Eddy Area, New Mexico



May 3, 2022

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Contents

Preface	2
How Soil Surveys Are Made	5
Soil Map	8
Soil Map.....	9
Legend.....	10
Map Unit Legend.....	11
Map Unit Descriptions.....	11
Eddy Area, New Mexico.....	13
PA—Pajarito loamy fine sand, 0 to 3 percent slopes, eroded.....	13
SM—Simona-Bippus complex, 0 to 5 percent slopes.....	14
References	17

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

Custom Soil Resource Report

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

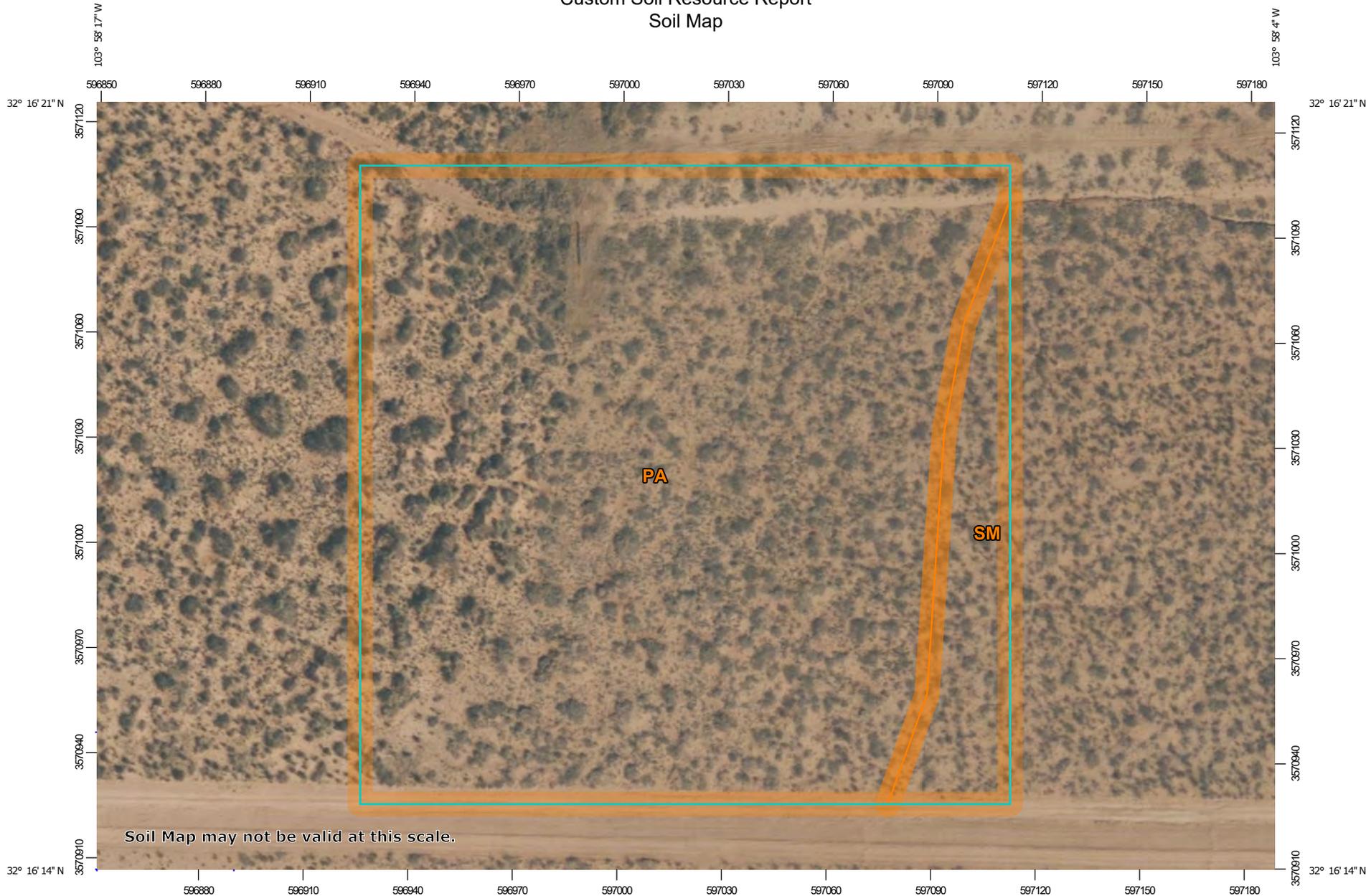
Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

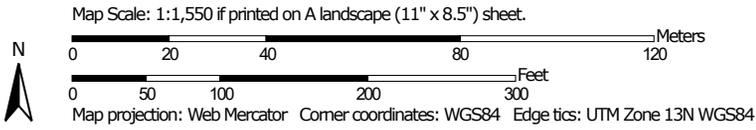
Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map



Soil Map may not be valid at this scale.



Custom Soil Resource Report

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 7, 2020—May 12, 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.

Custom Soil Resource Report

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
PA	Pajarito loamy fine sand, 0 to 3 percent slopes, eroded	7.6	90.4%
SM	Simona-Bippus complex, 0 to 5 percent slopes	0.8	9.6%
Totals for Area of Interest		8.4	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

Custom Soil Resource Report

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Custom Soil Resource Report

Eddy Area, New Mexico**PA—Pajarito loamy fine sand, 0 to 3 percent slopes, eroded****Map Unit Setting**

National map unit symbol: 1w54
Elevation: 2,700 to 5,500 feet
Mean annual precipitation: 5 to 15 inches
Mean annual air temperature: 57 to 70 degrees F
Frost-free period: 180 to 250 days
Farmland classification: Not prime farmland

Map Unit Composition

Pajarito and similar soils: 98 percent
Minor components: 2 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pajarito**Setting**

Landform: Plains, interdunes, dunes
Landform position (three-dimensional): Side slope
Down-slope shape: Convex, linear
Across-slope shape: Linear, convex
Parent material: Mixed alluvium and/or eolian sands

Typical profile

H1 - 0 to 13 inches: loamy fine sand
H2 - 13 to 36 inches: fine sandy loam
H3 - 36 to 60 inches: fine sandy loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Moderate (about 7.9 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: A
Ecological site: R042XC003NM - Loamy Sand
Hydric soil rating: No

Custom Soil Resource Report

Minor Components**Wink**

Percent of map unit: 1 percent
Ecological site: R042XC003NM - Loamy Sand
Hydric soil rating: No

Berino

Percent of map unit: 1 percent
Ecological site: R042XC003NM - Loamy Sand
Hydric soil rating: No

SM—Simona-Bippus complex, 0 to 5 percent slopes**Map Unit Setting**

National map unit symbol: 1w5x
Elevation: 1,800 to 5,000 feet
Mean annual precipitation: 8 to 24 inches
Mean annual air temperature: 57 to 70 degrees F
Frost-free period: 180 to 230 days
Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Simona**Setting**

Landform: Plains, alluvial fans
Landform position (three-dimensional): Rise
Down-slope shape: Convex, linear
Across-slope shape: Linear
Parent material: Mixed alluvium and/or eolian sands

Typical profile

H1 - 0 to 19 inches: gravelly fine sandy loam
H2 - 19 to 23 inches: indurated

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: 7 to 20 inches to petrocalcic
Drainage class: Well drained
Runoff class: Very 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

Custom Soil Resource Report

Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Very low (about 2.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: D
Ecological site: R042XC002NM - Shallow Sandy
Hydric soil rating: No

Description of Bippus**Setting**

Landform: Flood plains, alluvial fans
Landform position (three-dimensional): Talf, rise
Down-slope shape: Convex, linear
Across-slope shape: Linear
Parent material: Mixed alluvium

Typical profile

H1 - 0 to 37 inches: silty clay loam
H2 - 37 to 60 inches: clay loam

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
 (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: OccasionalNone
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Moderate (about 8.7 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: R042XC017NM - Bottomland
Hydric soil rating: No

Minor Components**Simona**

Percent of map unit: 8 percent
Ecological site: R042XC002NM - Shallow Sandy
Hydric soil rating: No

Bippus

Percent of map unit: 7 percent
Ecological site: R042XC017NM - Bottomland

Custom Soil Resource Report

Hydric soil rating: No

References

- American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.
- American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.
- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.
- Federal Register. July 13, 1994. Changes in hydric soils of the United States.
- Federal Register. September 18, 2002. Hydric soils of the United States.
- Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.
- National Research Council. 1995. Wetlands: Characteristics and boundaries.
- Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262
- Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577
- Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580
- Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.
- United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.
- United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374
- United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084>

Custom Soil Resource Report

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

Ecological site R042XC003NM Loamy Sand

Accessed: 05/03/2022

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.

Associated sites

R042XC004NM	Sandy Sandy
R042XC005NM	Deep Sand Deep Sand

Table 1. Dominant plant species

Tree	Not specified
Shrub	Not specified
Herbaceous	Not specified

Physiographic features

This site is on uplands, plains, dunes, fan piedmonts and in inter dunal areas. The parent material consists of mixed alluvium and or eolian sands derived from sedimentary rock. Slope range on this site range from 0 to 9 percent with the average of 5 percent.

Low stabilized dunes may occur occasionally on this site. Elevations range from 2,800 to 5,000 feet.

Table 2. Representative physiographic features

Landforms	(1) Fan piedmont (2) Alluvial fan (3) Dune
Elevation	2,800–5,000 ft
Slope	0–9%
Aspect	Aspect is not a significant factor

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 being late March or early April and the first killing frost being in later 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 from January through June, which accelerates soil drying during a critical period 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 from water from wetlands or streams.

Soil features

Soils are moderately deep or very deep. Surface textures are loamy fine sand, fine sandy loam, loamy very fine sand or gravelly sandy loam.

Subsurface is a loamy fine sand, coarse sandy loam, fine sandy loam or loam that averages less than 18 percent clay and less than 15 percent carbonates.

Substratum is a fine sandy loam or gravelly fine sandy loam with less than 15 percent gravel and with less than 40 percent calcium carbonate. Some layers high in lime or with caliche fragments may occur at depths of 20 to 30 inches.

These soils, if unprotected by plant cover and organic residue, become wind blown and low hummocks are formed.

Minimum and maximum values listed below represent the characteristic soils for this site.

Characteristic soils are:

Maljamar
Berino

Parjarito
Palomas
Wink
Pyote

Table 4. Representative soil features

Surface texture	(1) Fine sand (2) Fine sandy loam (3) Loamy fine sand
Family particle size	(1) Sandy
Drainage class	Well drained to somewhat excessively drained
Permeability class	Moderate to moderately rapid
Soil depth	40–72 in
Surface fragment cover <=3"	0–10%
Surface fragment cover >3"	0%
Available water capacity (0-40in)	5–7 in
Calcium carbonate equivalent (0-40in)	3–40%
Electrical conductivity (0-40in)	2–4 mmhos/cm
Sodium adsorption ratio (0-40in)	0–2
Soil reaction (1:1 water) (0-40in)	6.6–8.4
Subsurface fragment volume <=3" (Depth not specified)	4–12%
Subsurface fragment volume >3" (Depth not specified)	0%

Ecological dynamics

Overview

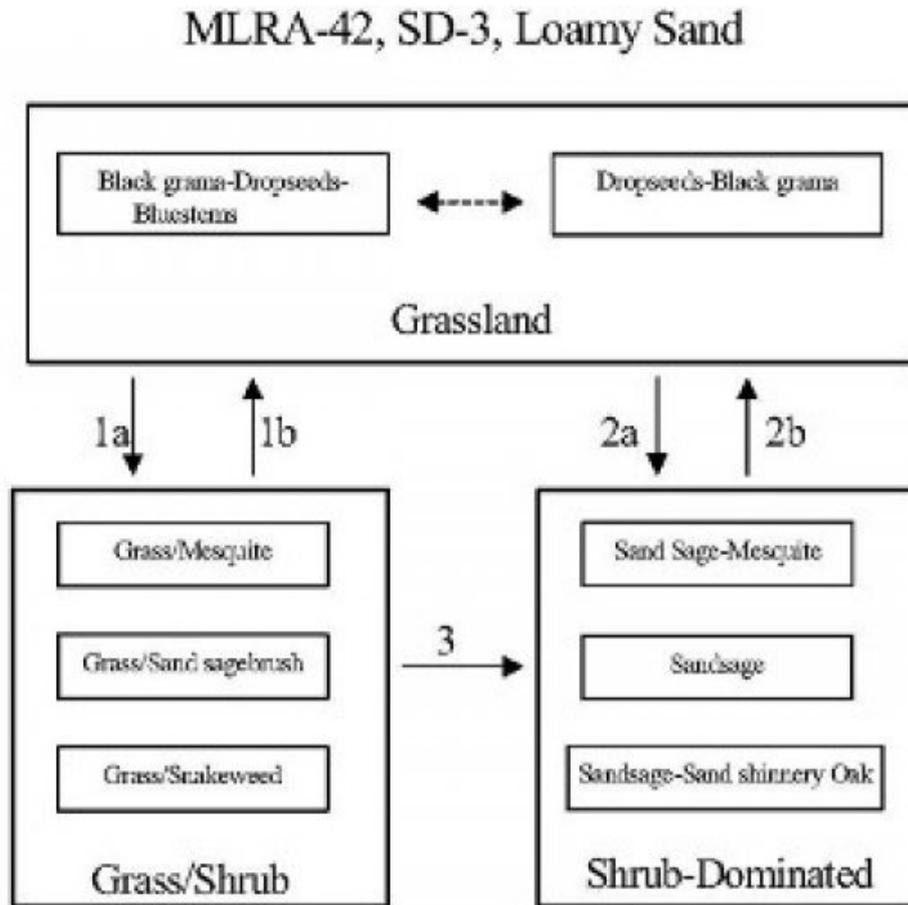
The Loamy Sand site intergrades with the Deep Sand and Sandy sites (SD-3). These sites can be differentiated by surface soil texture and depth to a textural change. Loamy Sand and Deep Sand sites have coarse textured (sands and loamy sand) surface soils while Sandy sites have moderately coarse textured (sandy loam and fine sandy loam) surfaces. Although Loamy Sand and Deep Sand sites have similar surface textures, the depth to a textural change is different—Loamy Sand sub-surface textures typically increase in clay at approximately 20 to 30 inches, and Deep Sand sites not until around 40 inches.

The historic plant community of Loamy Sand sites is dominated by black grama (*Bouteloua eriopoda*), dropseeds (*Sporobolus flexuosus*, *S. contractus*, *S. cryptandrus*), and bluestems (*Schizachyrium scoparium* and *Andropogon hallii*), with scattered shinnery oak (*Quercus havardii*) and sand sage (*Artemisia filifolia*). Perennial and annual forb abundance and distribution are dependent on precipitation. Litter and to a lesser extent, bare ground, are a significant proportion of ground cover while grasses compose the remainder. Decreases in black grama indicate a transition to either a grass/shrub or shrub-dominated state. The grass/shrub state is composed of grasses/honey mesquite (*Prosopis glandulosa*), grasses/broom snakeweed (*Gutierrezia sarothrae*), or grasses/sand sage. The shrub-dominated state occurs after a severe loss of grass cover and a prevalence of sand sage with secondary shinnery oak and mesquite. Heavy grazing intensity and/or drought are influential drivers in decreasing black grama and bluestems and subsequently increasing shrub cover, erosion, and bare patches. Historical fire suppression also encourages shrub pervasiveness and a competitive advantage over grass species (McPherson 1995). Brush and grazing management, however, may reverse grass/shrub and shrub-dominated states toward the grassland-

dominated historic plant community.

State and transition model

Plant Communities and Transitional Pathways (diagram):



- 1a. Drought, over grazing, fire suppression.
- 1b. Brush control, prescribed grazing

- 2.a Severe loss of grass cover, fire suppression, erosion.
- 2b. Brush control, seeding, prescribed grazing.

- 3. Continued loss of grass cover, erosion.

Figure 4.

**State 1
Historic Climax Plant Community**

Community 1.1 Historic Climax Plant Community

Grassland: The historic plant community is a uniformly distributed grassland dominated by black grama, dropseeds, and bluestems. Sand sage and shinnery oak are evenly dispersed throughout the grassland due to the coarse soil surface texture. Perennial and annual forbs are common but their abundance and distribution are reflective of precipitation. Bluestems initially, followed by black grama, decrease with drought and heavy grazing intensity. Historical fire frequency is unknown but likely occurred enough to remove small shrubs to the competitive advantage of grass species. Fire suppression, drought conditions, and excessive grazing drive most grass species out of competition with shrub species.

Diagnosis: Grassland dominated by black grama, dropseeds, and bluestems. Shrubs, such as sand sage, shinnery oak, and mesquite are dispersed throughout the grassland. Forbs are present and populations fluctuate with precipitation variability.

Table 5. Annual production by plant type

Plant Type	Low (Lb/Acre)	Representative Value (Lb/Acre)	High (Lb/Acre)
Grass/Grasslike	442	833	1224
Forb	110	208	306
Shrub/Vine	98	184	270
Total	650	1225	1800

Table 6. Ground cover

Tree foliar cover	0%
Shrub/vine/liana foliar cover	0%
Grass/grasslike foliar cover	28%
Forb foliar cover	0%
Non-vascular plants	0%
Biological crusts	0%
Litter	50%
Surface fragments >0.25" and <=3"	0%
Surface fragments >3"	0%
Bedrock	0%
Water	0%
Bare ground	22%

Figure 6. Plant community growth curve (percent production by month). NM2803, R042XC003NM-Loamy Sand-HCPC. SD-3 Loamy Sand - Warm season plant community .

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	0	3	5	10	10	25	30	12	5	0	0

State 2 Grass/Shrub

Community 2.1 Grass/Shrub



Grass/Shrub State: The grass/shrub state is dominated by communities of grasses/mesquite, grasses/snakeweed, or grasses/sand sage. Decreases in black grama and bluestem species lead to an increase in bare patches and mesquite which further competes with grass species. An increase of dropseeds and threeawns occurs. Grass distribution becomes more patchy with an absence or severe decrease in black grama and bluestems. Mesquite provides nitrogen and soil organic matter to co-dominant grasses (Ansley and Jacoby 1998, Ansley et al. 1998). Mesquite mortality when exposed to fire is low due to aggressive resprouting abilities. Herbicide application combined with subsequent prescribed fire may be more effective in mesquite reduction (Britton and Wright 1971).

Diagnosis: This state is dominated by an increased abundance of communities including grass/mesquite, grass/snakeweed, or grass/sand sage. Dropseeds and threeawns have a patchy distribution.

Transition to Grass/Shrub State (1a): The historic plant community begins to shift toward the grass/shrub state as drivers such as drought, fire suppression, interspecific competition, and excessive grazing contribute to alterations in soil properties and herbaceous cover. Cover loss and surface soil erosion are initial indicators of transition followed by a decrease in black grama with a subsequent increase of dropseeds, threeawns, mesquite, and snakeweed. Snakeweed has been documented to outcompete black grama especially under conditions of fire suppression and drought (McDaniel et al. 1984).

Key indicators of approach to transition:

- Loss of black grama cover
- Surface soil erosion
- Bare patch expansion
- Increased dropseed/threeawn and mesquite, snakeweed, or sand sage abundances

Transition to Historic Plant Community (1b): Brush and grazing management may restore the grassland component and reverse shrub or grass/shrub dominated states back toward the historic plant community.

State 3 Shrub Dominated

Community 3.1 Shrub Dominated

Shrub-Dominated State: The shrub-dominated state results from a severe loss of grass cover. This state’s primary species is sand sage. Shinnery oak and mesquite also occur; however, grass cover is limited to intershrub distribution. Sand sage stabilizes light sandy soils from wind erosion, which enhances protected grass/forb cover (Davis and Bonham 1979). However, shinnery oak also responds to the sandy soils with dense stands due to an aggressive rhizome system. Shinnery oak’s extensive root system promotes competitive exclusion of grasses and forbs. Sand sage, shinnery oak, and mesquite can be controlled with herbicide (Herbel et al. 1979, Pettit 1986).

Transition to Shrub-Dominated (2a): Severe loss of grass species with increased erosion and fire suppression will result in a transition to a shrub-dominated state with sand sage, Shin oak, and honey mesquite directly from the grassland-dominated state.

Key indicators of approach to transition:

- Severe loss of grass species cover
- Surface soil erosion
- Bare patch expansion
- Increased sand sage, shinnery oak, and mesquite abundance

Transition to Historic Plant Community (2b): Brush and grazing management may restore the grassland component and reverse shrub or grass/shrub dominated states back toward the historic plant community. In addition, seeding with native grass species will augment the transition to a grassland-dominated state.

Transition to Shrub-Dominated (3): If the grass/shrub site continues to lose grass cover with soil erosion, the site will transition to a shrub-dominated state with sand sage, shinnery oak, and honey mesquite.

Key indicators of approach to transition:

- Continual loss of dropseeds/threawns cover
- Surface soil erosion
- Bare patch expansion
- Increased sand sage, shinnery oak, and mesquite/dropseed/threawn and mesquite/snakeweed abundance

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					
1	Warm Season			61–123	
	little bluestem	SCSC	<i>Schizachyrium scoparium</i>	61–123	–
2	Warm Season			37–61	
	sand bluestem	ANHA	<i>Andropogon hallii</i>	37–61	–
3	Warm Season			37–61	
	cane bluestem	BOBA3	<i>Bothriochloa barbinodis</i>	37–61	–
	silver bluestem	BOSA	<i>Bothriochloa saccharoides</i>	37–61	–
4	Warm Season			123–184	
	black grama	BOER4	<i>Bouteloua eriopoda</i>	123–184	–
	bush muhly	MUPO2	<i>Muhlenbergia porteri</i>	123–184	–
5	Warm Season			123–184	
	thin paspalum	PASE5	<i>Paspalum setaceum</i>	123–184	–

	prains bristlegress	SEVUZ	<i>Setaria vupiseta</i>	123-184	-
	fringed signalgrass	URCI	<i>Urochloa ciliatissima</i>	123-184	-
6	Warm Season			123-184	
	spike dropseed	SPCO4	<i>Sporobolus contractus</i>	123-184	-
	sand dropseed	SPCR	<i>Sporobolus cryptandrus</i>	123-184	-
	mesa dropseed	SPFL2	<i>Sporobolus flexuosus</i>	123-184	-
7	Warm Season			61-123	
	hooded windmill grass	CHCU2	<i>Chloris cucullata</i>	61-123	-
	Arizona cottontop	DICA8	<i>Digitaria californica</i>	61-123	-
9	Other Perennial Grasses			37-61	
	Grass, perennial	2GP	<i>Grass, perennial</i>	37-61	-
Shrub/Vine					
8	Warm Season			37-61	
	New Mexico feathergrass	HENE5	<i>Hesperostipa neomexicana</i>	37-61	-
	giant dropseed	SPGI	<i>Sporobolus giganteus</i>	37-61	-
10	Shrub			61-123	
	sand sagebrush	ARFI2	<i>Artemisia filifolia</i>	61-123	-
	Havard oak	QUHA3	<i>Quercus havardii</i>	61-123	-
11	Shrub			34-61	
	fourwing saltbush	ATCA2	<i>Atriplex canescens</i>	37-61	-
	featherplume	DAFO	<i>Dalea formosa</i>	37-61	-
12	Shrub			37-61	
	jointfir	EPHED	<i>Ephedra</i>	37-61	-
	littleleaf ratany	KRER	<i>Krameria erecta</i>	37-61	-
13	Other Shrubs			37-61	
	Shrub (>.5m)	2SHRUB	<i>Shrub (>.5m)</i>	37-61	-
Forb					
14	Forb			61-123	
	leatherweed	CRPOP	<i>Croton pottsii var. pottsii</i>	61-123	-
	Indian blanket	GAPU	<i>Gaillardia pulchella</i>	61-123	-
	globemallow	SPHAE	<i>Sphaeralcea</i>	61-123	-
15	Forb			12-37	
	woolly groundsel	PACA15	<i>Packera cana</i>	12-37	-
16	Forb			61-123	
	touristplant	DIWI2	<i>Dimorphocarpa wislizeni</i>	61-123	-
	woolly plantain	PLPA2	<i>Plantago patagonica</i>	61-123	-
17	Other Forbs			37-61	
	Forb (herbaceous, not grass nor grass-like)	2FORB	<i>Forb (herbaceous, not grass nor grass-like)</i>	37-61	-

Animal community

This Ecological Site provides habitat which supports a resident animal community that is characterized by pronghorn antelope, desert cottontail, spotted ground squirrel, black-tailed prairie dog, yellow faced pocket gopher, Ord's kangaroo rat, northern grasshopper mouse, southern plains woodrat, badger, roadrunner, meadowlark, burrowing owl, white necked raven, lesser prairie chicken, morning dove, scaled quail, Harris hawk, side blotched

lizard, marbled whiptail, Texas horned lizard, western diamondback rattlesnake, dusty hognose snake and ornate box turtle.

Where mesquite has invaded, most resident birds and scissor-tailed flycatcher, morning dove and Swainson's hawk, nest. Vesper and grasshopper sparrows utilize the site during migration.

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

Berino B

Kinco A

Maljamar B

Pajarito B

Palomas B

Wink B

Pyote A

Recreational uses

This site offers recreation potential for hiking, borseback riding, nature observation, photography and hunting. During years of abundant spring moisture, this site displays a colorful array of wildflowers during May and June.

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 at any time of year. In cases where this site has been invaded by brush species it is especially suited for goats. Mismanagement of this site will cause a decrease in species such as the bluestems, black grama, bush muhly, plains bristlegrass, New Mexico feathergrass, Arizona cottontop and fourwing saltbush. A corresponding increase in the dropseeds, windmill grass, fall witchgrass, silver bluestem, sand sagebrush, shinery oak and ephedra will occur. This will also cause an increase in bare ground which will increase soil erodibility. This site will respond well 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 2.3 – 3.5

75 – 51 3.0 – 4.5

50 – 26 4.6 – 9.0

25 – 0 9.1 +

Inventory data 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 Chaves County.

Other references

Literature Cited:

Ansley, R. J.; Jacoby, P. W. 1998. Manipulation of fire intensity to achieve mesquite management goals in north Texas. In: Pruden, Teresa L.; Brennan, Leonard A., eds. Fire in ecosystem management: shifting the paradigm from suppression to prescription: Proceedings, Tall Timbers fire ecology conference; 1996 May 7-10; Boise, ID. No. 20. Tallahassee, FL: Tall Timbers Research Station: 195-204.

Ansley, R. J.; Jones, D. L.; Tunnell, T. R.; [and others]. 1998. Honey mesquite canopy responses to single winter fires: relation to herbaceous fuel, weather and fire temperature. International Journal of Wildland Fire 8(4):241-252.

Britton, Carlton M.; Wright, Henry A. 1971. Correlation of weather and fuel variables to mesquite damage by fire. Journal of Range Management 24:136-141.

Davis, Joseph H., III and Bonham, Charles D. 1979. Interference of sand sagebrush canopy with needleandthread. Journal of Range Management 32(5):384-386.

Herbel, C. H, Steger, R, Gould, W. L. 1974. Managing semidesert ranges of the Southwest Circular 456. Las Cruces, NM: New Mexico State University, Cooperative Extension Service. 48 p.

McDaniel, Kirk C.; Pieper, Rex D.; Loomis, Lyn E.; Osman, Abdelgader A. 1984. Taxonomy and ecology of perennial snakeweeds in New Mexico. Bulletin 711. Las Cruces, NM: New Mexico State University, Agricultural Experiment Station. 34 p.

McPherson, Guy R. 1995. The role of fire in the desert grasslands. In: McClaran, Mitchel P.; Van Devender, Thomas R., eds. The desert grassland. Tucson, AZ: The University of Arizona Press: 130-151.

Pettit, Russell D. 1986. Sand shinnery oak: control and management. Management Note 8. Lubbock, TX: Texas Tech University, College of Agricultural Sciences, Department of Range and Wildlife Management. 5 p.

Contributors

Don Sylvester
Quinn Hodgson

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):**

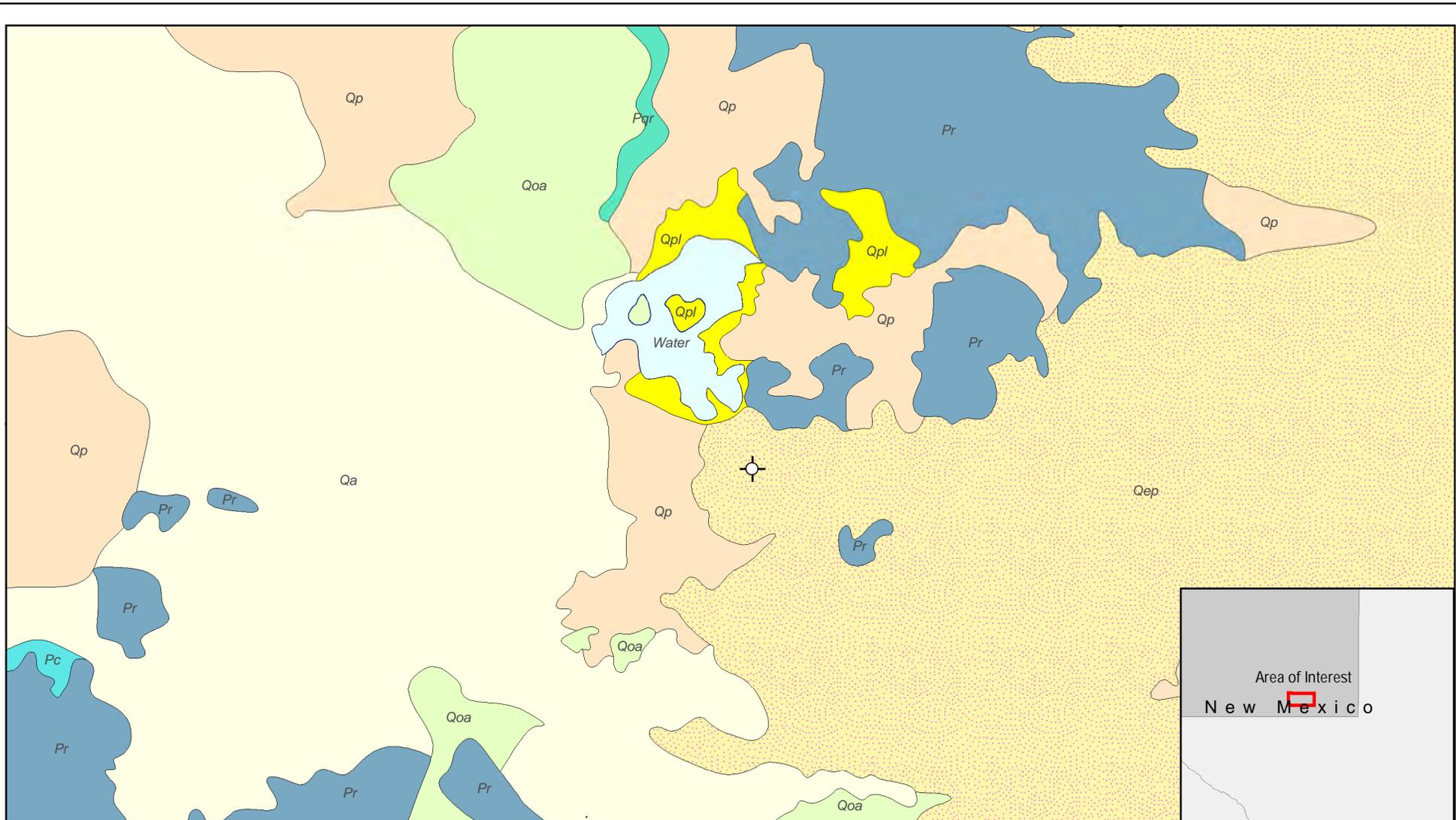
14. **Average percent litter cover (%) and depth (in):**

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:**

Document Path: G:\1-Projects\US PROJECTS\Devon Energy Corporation\2022\22E-01417 - Papa Fritas 27 CTB 1\Figures\Figure G Geology_Papas Fritas 27 CTB 1.mxd



⊕ Site Location
Faults
 - - - [concealed]: Covered by another unit
Lithologic Contacts
 — [contact] lithologic
Lithologic Units
 Pc

	Pqm		Qep		Water
	Pqr		Qoa		
	Pr		Qp		
	Qa		Qpl		



0 0.5 1 2 Miles
 Map Center:
 Lat/Long: 32.180843, -103.720017

Date: May 05/22



Geological Map
Papas Fritas 27 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.

Closure Criteria Worksheet			
Site Name: Papas Fritas 27 CTB 1			
Spill Coordinates:		X: 32.271641	Y: -103.969901
Site Specific Conditions		Value	Unit
1	Depth to Groundwater	18	feet
2	Within 300 feet of any continuously flowing watercourse or any other significant watercourse	3,555	feet
3	Within 200 feet of any lakebed, sinkhole or playa lake (measured from the ordinary high-water mark)	2,002	feet
4	Within 300 feet from an occupied residence, school, hospital, institution or church	18,480	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	5,318	feet
	ii) Within 1000 feet of any fresh water well or spring	5,318	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	4,486	feet
8	Within the area overlying a subsurface mine		(Y/N)
9	Within an unstable area (Karst Map)	Medium	Critical High Medium Low
10	Within a 100-year Floodplain	500	year
11	Soil Type	loamy fine sand, gravelly fine sandy loam, silty clay loam	
12	Ecological Classification	loamy sand	
13	Geology	R042XC003NM Loamy sand	
	NMAC 19.15.29.12 E (Table 1) Closure Criteria	<50'	<50' 51-100' >100'

ATTACHMENT 5

Papas Fritas 27 CTB 1 48 HR Notification Liner Inspection nAPP2210924425



Dhugal Hanton <vertexresourcegroupusa@gmail.com>

to OCD,, BLM_NM

All,

Please accept this email as 48-hr notification that Vertex Resource Services has scheduled a liner inspection to be conducted for the following release:

nAPP2210924425 DOR: 4/18/2022 Site Name: Papas Fritas 27 CTB 1

This work will be completed on behalf of Devon Energy Production Company

On Saturday, May 14, 2022 at approximately 12:00 p.m., Lakin Pullman will be on site to conduct a liner inspection. He can be reached at 701-495-1722. If you need directions to the site please give me a call at 575-361-9880.

Thank you,

Monica Peppin

Project Manager

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

P 575.725.5001 Ext. 711

C 575.361.9880

F

www.vertex.co

Confidentiality Notice: This message and any attachments are solely for the intended recipient and may contain confidential or privileged information. If you are not the intended recipient, any disclosure of this communication in error, please notify us by reply email and immediately and permanently delete this message and any attachments. Thank you.



Dhugal Hanton <vertexresourcegroupusa@gmail.com>

48 hour confirmation sampling notice Papa Fritas 27 CTB 1

3 messages

Dhugal Hanton <vertexresourcegroupusa@gmail.com>

Mon, Sep 26, 2022 at 12:16 PM

To: "Enviro, OCD, EMNRD" <OCD.Enviro@state.nm.us>, spills@slo.state.nm.us

Please accept this email as 48-hr notification that Vertex Resource Services has scheduled confirmatory sampling to be conducted at Papa Fritas 27 CTB 1,

Lea County

NAPP2113158013 & NAPP2127146416.

On Thursday, September 29, 2022, at approximately 8:00 a.m through Friday September 30, Fernando Rodriguez of Vertex will be onsite to conduct confirmation sampling for the above release.

He can be reached at 575-361-4509. If you need directions to the site, please do not hesitate to contact me. If you have any questions or concerns regarding this notification, please give me a call 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
F

Nobui, Jennifer, EMNRD <Jennifer.Nobui@emnrd.nm.gov>

Mon, Sep 26, 2022 at 1:40 PM

To: Dhugal Hanton <vertexresourcegroupusa@gmail.com>

Cc: "Bratcher, Michael, EMNRD" <mike.bratcher@emnrd.nm.gov>, "Hamlet, Robert, EMNRD" <Robert.Hamlet@emnrd.nm.gov>, "Harimon, Jocelyn, EMNRD" <Jocelyn.Harimon@emnrd.nm.gov>

Kent

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: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Sent: Monday, September 26, 2022 1:37 PM
To: Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Nobui, Jennifer, EMNRD <Jennifer.Nobui@emnrd.nm.gov>; Harimon, Jocelyn, EMNRD <Jocelyn.Harimon@emnrd.nm.gov>; Hamlet, Robert, EMNRD <Robert.Hamlet@emnrd.nm.gov>; Velez, Nelson, EMNRD <Nelson.Velez@emnrd.nm.gov>
Subject: Fw: [EXTERNAL] 48 hour confirmation sampling notice Papa Fritas 27 CTB 1

From: Dhugal Hanton <vertexresourcegroupusa@gmail.com>
Sent: Monday, September 26, 2022 12:16 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>; spills@slo.state.nm.us <spills@slo.state.nm.us>
Subject: [EXTERNAL] 48 hour confirmation sampling notice Papa Fritas 27 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, Sep 30, 2022 at 11:49 AM
 To: "Nobui, Jennifer, EMNRD" <Jennifer.Nobui@emnrd.nm.gov>
 Cc: "Bratcher, Michael, EMNRD" <mike.bratcher@emnrd.nm.gov>, "Hamlet, Robert, EMNRD" <Robert.Hamlet@emnrd.nm.gov>, "Harimon, Jocelyn, EMNRD" <Jocelyn.Harimon@emnrd.nm.gov>

Jennifer,

Thank you. I would like to extend the notification to include next week. On Monday, October 3, 2022, at approximately 8:00 a.m through Friday October 7, Fernando Rodriguez of Vertex will be onsite to conduct confirmation sampling at Papa Fritas 27 CTB 1, Lea County, NAPP2113158013 & NAPP2127146416.

Thanks,
 Kent

[Quoted text hidden]



Dhugal Hanton <vertexresourcegroupusa@gmail.com>

Confirmation sampling 48 hour notice

4 messages

Dhugal Hanton <vertexresourcegroupusa@gmail.com>

Tue, Oct 25, 2022 at 8:33 AM

To: "Nobui, Jennifer, EMNRD" <Jennifer.Nobui@state.nm.us>, "Enviro, OCD, EMNRD" <OCD.Enviro@state.nm.us>

Jennifer,

I would like to provide notification to include On Thursday, October 27, 2022, at approximately 8:00 a.m through Friday October 8, Chance Dixon of Vertex will be onsite to conduct confirmation sampling at Papa Fritas 27 CTB 1, Lea County, NAPP2113158013 & NAPP2127146416.

Thank you,

Kent

Nobui, Jennifer, EMNRD <Jennifer.Nobui@emnrd.nm.gov>

Tue, Oct 25, 2022 at 9:57 AM

To: Dhugal Hanton <vertexresourcegroupusa@gmail.com>

Hi Kent

Your dates below are off, did you mean through Friday November 4? Also, please note that the responsible party must provide at least two business days' notice to the OCD as opposed to 48-hour notification.

Thanks,

Jennifer Nobui

From: Dhugal Hanton <vertexresourcegroupusa@gmail.com>

Sent: Tuesday, October 25, 2022 8:33 AM

To: Nobui, Jennifer, EMNRD <Jennifer.Nobui@emnrd.nm.gov>; Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>

Subject: [EXTERNAL] Confirmation sampling 48 hour notice

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>

Tue, Oct 25, 2022 at 1:33 PM

To: "Nobui, Jennifer, EMNRD" <Jennifer.Nobui@emnrd.nm.gov>

Jennifer,

I apologise. I intended to extend the sampling from Wednesday 10/26/2022, into Thursday 10/27/2022 and Friday 10/28/2022.

Thank you,

Kent

[Quoted text hidden]

Nobui, Jennifer, EMNRD <Jennifer.Nobui@emnrd.nm.gov>
To: Dhugal Hanton <vertexresourcegroupusa@gmail.com>

Tue, Oct 25, 2022 at 1:37 PM

Kent,

No worries. Dates have been noted. Going forward, please keep in mind that notification is not 48 hours but 2 business days. 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.

[Quoted text hidden]

ATTACHMENT 6



Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	5/14/2022
Site Location Name:	Papa Fritas 27 CTB 1	Report Run Date:	5/14/2022 10:56 PM
Client Contact Name:	Wes Matthews	API #:	
Client Contact Phone #:	(575) 748-0176	Project Owner:	
Unique Project ID		Project Manager:	
Project Reference #			

Summary of Times

Arrived at Site	5/14/2022 9:08 AM
Departed Site	5/14/2022 10:15 AM

Field Notes

- 9:11** Completed safety paperwork at office. On site to perform Liner Inspection.
- 10:03** Inspected outside and inside walls of containment and found no damage or breaches.
- 10:05** Inspected areas around outside containment and found no unexpected staining.
- 10:06** Inspected liner inside containment around and between tanks and equipment. Did not find damage to liner or any areas of concern.

Next Steps & Recommendations

- 1** Submit report to client.



Daily Site Visit Report

Site Photos

Viewing Direction: East



Descriptive Photo - 9
Viewing Direction: East
Desc: West of tank containment facing east.
Created: 5/14/2022 9:47:10 AM
Lat:32.271674, Long:-103.988866

Southwest corner outside containment facing east. South end of containment, outside.

Viewing Direction: South



Descriptive Photo - 10
Viewing Direction: South
Desc: Northwest corner inside containment facing south. West side of containment.
Created: 5/14/2022 9:46:05 AM
Lat:32.271690, Long:-103.988854

Northwest corner inside containment facing south. West side of containment, inside.

Viewing Direction: East



Descriptive Photo - 11
Viewing Direction: East
Desc: Southwest corner inside containment facing east. South end of containment.
Created: 5/14/2022 9:47:39 AM
Lat:32.271692, Long:-103.988747

Southwest corner inside containment facing east. South end of containment, inside.

Viewing Direction: North



Descriptive Photo - 12
Viewing Direction: North
Desc: Southeast corner inside containment facing north. East side of containment.
Created: 5/14/2022 9:50:51 AM
Lat:32.271684, Long:-103.988723

Southeast corner inside containment facing north. East side of containment, inside.



Daily Site Visit Report

Viewing Direction: West



Descriptive Photo - 13
Viewing Direction: West
Desc: Northeast corner inside containment facing west. North end of containment,
Created: 5/14/2022 9:53:23 AM
Lat:32.271928, Long:-103.969744

Northeast corner inside containment facing west. North end of containment, inside.

Viewing Direction: South



Descriptive Photo - 14
Viewing Direction: South
Desc: North end of tanks facing south.
Created: 5/14/2022 9:54:08 AM
Lat:32.271776, Long:-103.969800

North end of tanks facing south.

Viewing Direction: North



Descriptive Photo - 15
Viewing Direction: North
Desc: South end of tanks facing north.
Created: 5/14/2022 9:55:13 AM
Lat:32.271916, Long:-103.969782

South end of tanks facing north.

Viewing Direction: West



Descriptive Photo - 16
Viewing Direction: East
Desc: West of tanks facing east. Between tanks, south.
Created: 5/14/2022 9:56:28 AM
Lat:32.271786, Long:-103.969897

West of tanks facing east. Between tanks, south.



Daily Site Visit Report



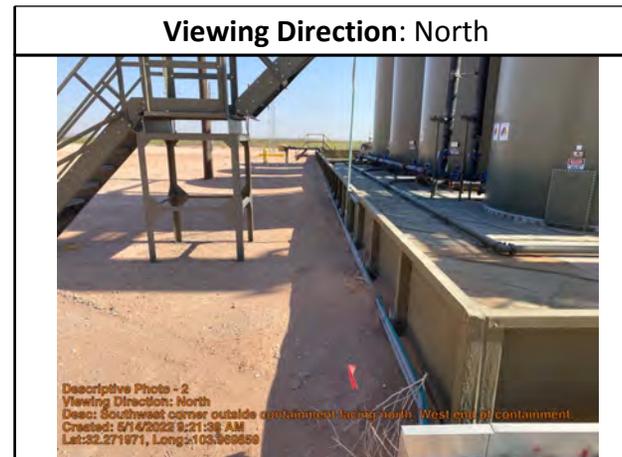
East of tanks facing west. Between tanks, middle.



East of tanks facing west. Between tanks, north.



Northeast corner inside containment facing south. East side of containment, inside.



Southwest corner outside containment facing north. West side of containment, outside.



Daily Site Visit Report



Southeast corner inside containment facing east. South end of containment, inside.



Northwest corner outside containment facing south. West side of containment, outside.



Northwest corner outside containment facing east. North end of containment, outside.



Northeast corner outside containment facing west. North end of containment, outside.



Daily Site Visit Report

Viewing Direction: South



Descriptive Photo - 8
Viewing Direction: South
Desc: Northeast corner outside containment facing south. East side of containment.
Created: 5/14/2022 9:25:41 AM
Lat:32.271863, Long:-103.868882

Northeast corner outside containment facing south. East side of containment, outside.

Viewing Direction: North



Descriptive Photo - 8
Viewing Direction: North
Desc: Southeast corner outside containment facing north. East side of containment.
Created: 5/14/2022 9:27:31 AM
Lat:32.271862, Long:-103.868884

Southeast corner outside containment facing north. East side of containment, outside.

Viewing Direction: West



Descriptive Photo - 8
Viewing Direction: West
Desc: Southeast corner outside containment facing west. South side of containment.
Created: 5/14/2022 9:28:37 AM
Lat:32.271867, Long:-103.868819

Southeast corner outside containment facing west. South side of containment, outside.

Viewing Direction: East



Descriptive Photo - 8
Viewing Direction: East
Desc: Northwest corner inside containment facing east. North end of containment.
Created: 5/14/2022 9:27:53 AM
Lat:32.271862, Long:-103.868840

Northwest corner inside containment facing east. North end of containment, inside.

Daily Site Visit Report



Daily Site Visit Signature

Inspector: Lakin Pullman

Signature:

A handwritten signature in black ink, appearing to be 'LP', written over a horizontal line. The word 'Signature' is printed in small text below the line.



Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	5/14/2022
Site Location Name:	Papa Fritas 27 CTB 1	Report Run Date:	5/14/2022 10:55 PM
Client Contact Name:	Wes Matthews	API #:	
Client Contact Phone #:	(575) 748-0176	Project Owner:	
Unique Project ID		Project Manager:	
Project Reference #			

Summary of Times

Arrived at Site	5/14/2022 6:49 AM
Departed Site	5/14/2022 9:08 AM

Field Notes

- 9:09** Completed safety paperwork at office. Investigated partial work done on historic spill by competitor. Phase 2 of project.
- 8:15** Staining no longer visible in most places to identify release area. Previous consultant white-flagged edges of release. Used visible staining and white flags to map approximate release area in Arc Collector.
- 9:03** Added white flags to edges of release area off pad. Painted and added additional white flags to edges of release area on pad.
- 8:20** North edge of release is bounded by berm covering water line.

Next Steps & Recommendations

- 1 Place one calls and arrange excavation.



Daily Site Visit Report

Site Photos

Viewing Direction: Northeast



Descriptive Photo - 1
Viewing Direction: Northeast
Desc: North edge of pad facing northwest. Added flags to edges of release area off-pad.
Created: 5/14/2022 8:17:49 AM
Lat:32.272938, Long:-103.852947

North edge of pad facing northwest. Added flags to edges of release area off-pad.

Viewing Direction: East



Descriptive Photo - 12
Viewing Direction: East
Desc: West end of release area facing east. Outlined approximate release area on pad with additional white flags and paint.
Created: 3/14/2022 9:01:03 AM
Lat:32.271427, Long:-103.852947

West end of release area facing east. Outlined approximate release area on pad with additional white flags and paint.



Daily Site Visit Report

Viewing Direction: Northwest

Descriptive Photo - 11
Viewing Direction: Northwest
Desc: South end of release area facing northwest. Outlined approximate release area on pad with additional white flags and paint.
Created: 5/14/2022 9:02:51 AM
Lat:32.271676, Long:-103.863961

South end of release area facing northwest. Outlined approximate release area on pad with additional white flags and paint.

Viewing Direction: North

Descriptive Photo - 12
Viewing Direction: North
Desc: South end of release area facing north. Outlined approximate release area on pad with additional white flags and paint.
Created: 5/14/2022 9:03:16 AM
Lat:32.271676, Long:-103.863961

South end of release area facing north. Outlined approximate release area on pad with additional white flags and paint.

Viewing Direction: South

Descriptive Photo - 13
Viewing Direction: South
Desc: Northeast corner of release facing south. Added flags to edges of release area off-pad.
Created: 5/14/2022 9:18:21 AM
Lat:32.271676, Long:-103.863961

Northeast corner of release facing south. Added flags to edges of release area off-pad.

Viewing Direction: West

Descriptive Photo - 14
Viewing Direction: West
Desc: Northeast corner of release facing west. Added flags to edges of release area off-pad.
Created: 5/14/2022 9:19:01 AM
Lat:32.271676, Long:-103.863961

Northeast corner of release facing west. Added flags to edges of release area off-pad.



Daily Site Visit Report

Viewing Direction: West

Northwest corner of release facing east. Added flags to edges of release area off-pad.

Viewing Direction: East

North of pad facing east. Added flags to edges of release area off-pad.

Viewing Direction: North

Northeast corner of equipment cluster facing east. Outlined approximate release area on pad with additional white flags and paint.

Viewing Direction: North

Northeast corner of equipment cluster facing north. Outlined approximate release area on pad with additional white flags and paint.



Daily Site Visit Report

Viewing Direction: West



Descriptive Photo - 8
Viewing Direction: West
Desc: North edge of pad facing west. Outlined approximate release area on pad with
Created: 5/14/2022 8:58:38 AM
Lat:33.372077, Long:-103.809066

North edge of pad facing west. Outlined approximate release area on pad with additional white flags and paint.

Viewing Direction: Southwest



Descriptive Photo - 9
Viewing Direction: Southwest
Desc: North edge of pad facing southwest. Outlined approximate release area on pa
Created: 5/14/2022 8:59:37 AM
Lat:33.372109, Long:-103.879501

North edge of pad facing southwest. Outlined approximate release area on pad with additional white flags and paint.

Daily Site Visit Report



Daily Site Visit Signature

Inspector: Lakin Pullman

Signature:

A handwritten signature in black ink, consisting of a large, stylized 'L' followed by a 'P' and a flourish.

Signature



Daily Site Visit Report

Client:	Devon Energy Corporation	Inspection Date:	10/27/2022
Site Location Name:	Papa Fritas 27 CTB 1	Report Run Date:	10/27/2022 7:52 PM
Client Contact Name:	Wes Matthews	API #:	
Client Contact Phone #:	(575) 748-0176	Project Owner:	
Unique Project ID		Project Manager:	
Project Reference #			

Summary of Times

Arrived at Site	10/27/2022 8:45 AM
Departed Site	10/27/2022 12:00 PM

Field Notes

- 9:26** Arrived on site to excavate and collect samples that were above criteria on chlorides from lab
- 10:39** Samples WES22-10, BES22-27, and BES22-30 through BES22-31 are clean on field screening and will be sent to lab for analysis.
- 10:40** BES22-07 and BES22-11 were collected at 2.5' in the pasture as they were not collected last week.
Scanned all data and made sure that we have data under criteria for each sample point.

Next Steps & Recommendations

- 1** Send final samples to lab for analysis to complete fonrimation



Daily Site Visit Report

Site Photos

Viewing Direction: Southeast



Descriptive Photo - 10
Viewing Direction: Southeast
Event: Sample area for WES22-10
Created: 10/27/2022 10:45:16 AM
Lat: 32.271746, Long: 103.909808

Sample area for WES22-10

Viewing Direction: Southwest



Descriptive Photo - 10
Viewing Direction: Southwest
Event: Final excavation pad
Created: 10/27/2022 10:45:16 AM
Lat: 32.271746, Long: 103.909808

Final excavation pad

Viewing Direction: Northwest



Descriptive Photo - 10
Viewing Direction: Northwest
Event: Final excavation pad
Created: 10/27/2022 10:45:16 AM
Lat: 32.271746, Long: 103.909808

Final excavation pad

Viewing Direction: East



Descriptive Photo - 10
Viewing Direction: East
Event: Final excavation pad
Created: 10/27/2022 10:45:16 AM
Lat: 32.271746, Long: 103.909808

Final excavation pad



Daily Site Visit Report



Final excavation pad



Final excavation pad



Sample area for BES22-27 and BES22-30 through BES22-31



Sample area for BES22-11



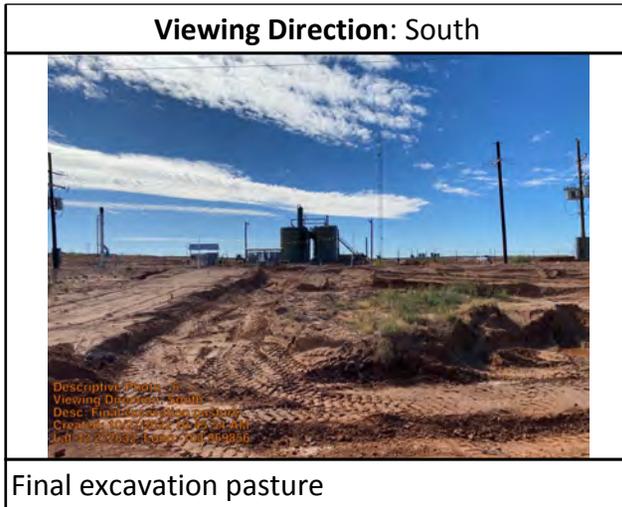
Daily Site Visit Report



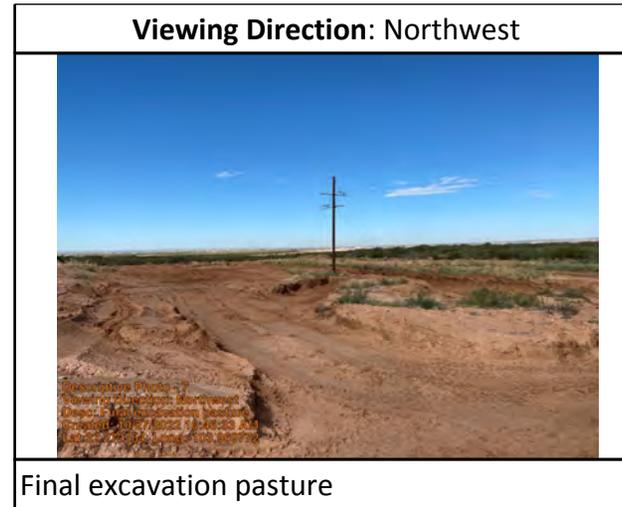
Sample area for BES22-07



Final excavation pasture



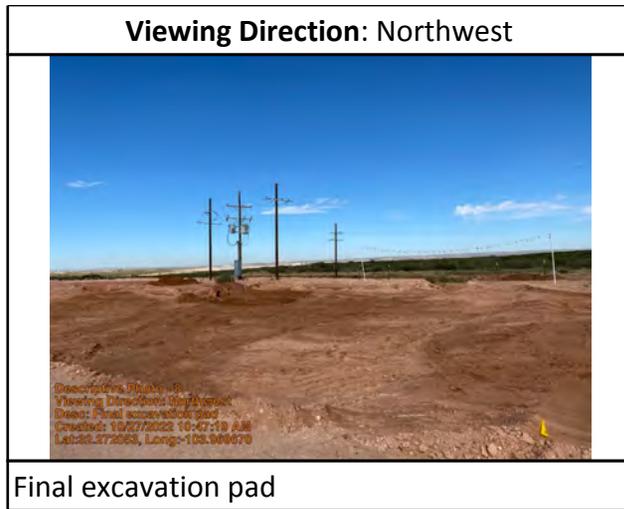
Final excavation pasture



Final excavation pasture



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 'CA', written over a horizontal line.

Signature

ATTACHMENT 7



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

October 19, 2022

Kent Stallings

Vertex Resources Services, Inc.

3101 Boyd Drive

Carlsbad, NM 88220

TEL: (505) 506-0040

FAX

RE: Papas Fritas 27 CTB1

OrderNo.: 2210378

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 18 sample(s) on 10/7/2022 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 white background.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order 2210378

Date Reported: 10/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-01 2'

Project: Papas Fritas 27 CTB1

Collection Date: 10/5/2022 9:45:00 AM

Lab ID: 2210378-001

Matrix: SOIL

Received Date: 10/7/2022 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	10/12/2022 10:29:08 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/12/2022 10:29:08 AM
Surr: DNOP	57.6	21-129		%Rec	1	10/12/2022 10:29:08 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	10/11/2022 9:58:00 PM
Surr: BFB	93.2	37.7-212		%Rec	1	10/11/2022 9:58:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.023		mg/Kg	1	10/11/2022 9:58:00 PM
Toluene	ND	0.046		mg/Kg	1	10/11/2022 9:58:00 PM
Ethylbenzene	ND	0.046		mg/Kg	1	10/11/2022 9:58:00 PM
Xylenes, Total	ND	0.092		mg/Kg	1	10/11/2022 9:58:00 PM
Surr: 4-Bromofluorobenzene	91.1	70-130		%Rec	1	10/11/2022 9:58:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	10/12/2022 4:31:27 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 **2210378**

Date Reported: **10/19/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-03 2'

Project: Papas Fritas 27 CTB1

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

Lab ID: 2210378-002

Matrix: SOIL

Received Date: 10/7/2022 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	10/12/2022 8:34:42 PM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	10/12/2022 8:34:42 PM
Surr: DNOP	97.5	21-129		%Rec	1	10/12/2022 8:34:42 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/11/2022 10:18:00 PM
Surr: BFB	95.2	37.7-212		%Rec	1	10/11/2022 10:18:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.023		mg/Kg	1	10/11/2022 10:18:00 PM
Toluene	ND	0.047		mg/Kg	1	10/11/2022 10:18:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	10/11/2022 10:18:00 PM
Xylenes, Total	ND	0.093		mg/Kg	1	10/11/2022 10:18:00 PM
Surr: 4-Bromofluorobenzene	96.9	70-130		%Rec	1	10/11/2022 10:18:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	10/12/2022 5:08:29 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 2210378

Date Reported: 10/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-16 2'

Project: Papas Fritas 27 CTB1

Collection Date: 10/5/2022 10:35:00 AM

Lab ID: 2210378-003

Matrix: SOIL

Received Date: 10/7/2022 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	10/12/2022 8:55:52 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/12/2022 8:55:52 PM
Surr: DNOP	99.2	21-129		%Rec	1	10/12/2022 8:55:52 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/11/2022 10:37:00 PM
Surr: BFB	97.2	37.7-212		%Rec	1	10/11/2022 10:37:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.023		mg/Kg	1	10/11/2022 10:37:00 PM
Toluene	ND	0.047		mg/Kg	1	10/11/2022 10:37:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	10/11/2022 10:37:00 PM
Xylenes, Total	ND	0.094		mg/Kg	1	10/11/2022 10:37:00 PM
Surr: 4-Bromofluorobenzene	97.1	70-130		%Rec	1	10/11/2022 10:37:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	170	60		mg/Kg	20	10/12/2022 5:45:31 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 25

Analytical Report

Lab Order 2210378

Date Reported: 10/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-18 2'

Project: Papas Fritas 27 CTB1

Collection Date: 10/5/2022 11:30:00 AM

Lab ID: 2210378-004

Matrix: SOIL

Received Date: 10/7/2022 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	10/12/2022 9:06:33 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/12/2022 9:06:33 PM
Surr: DNOP	109	21-129		%Rec	1	10/12/2022 9:06:33 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/11/2022 10:57:00 PM
Surr: BFB	97.4	37.7-212		%Rec	1	10/11/2022 10:57:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.025		mg/Kg	1	10/11/2022 10:57:00 PM
Toluene	ND	0.049		mg/Kg	1	10/11/2022 10:57:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/11/2022 10:57:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	10/11/2022 10:57:00 PM
Surr: 4-Bromofluorobenzene	97.8	70-130		%Rec	1	10/11/2022 10:57:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	10/12/2022 5:57:51 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 2210378

Date Reported: 10/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-20 2'

Project: Papas Fritas 27 CTB1

Collection Date: 10/5/2022 11:45:00 AM

Lab ID: 2210378-005

Matrix: SOIL

Received Date: 10/7/2022 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	10/12/2022 9:17:09 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	10/12/2022 9:17:09 PM
Surr: DNOP	80.9	21-129		%Rec	1	10/12/2022 9:17:09 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/11/2022 11:17:00 PM
Surr: BFB	90.9	37.7-212		%Rec	1	10/11/2022 11:17:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.023		mg/Kg	1	10/11/2022 11:17:00 PM
Toluene	ND	0.047		mg/Kg	1	10/11/2022 11:17:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	10/11/2022 11:17:00 PM
Xylenes, Total	ND	0.094		mg/Kg	1	10/11/2022 11:17:00 PM
Surr: 4-Bromofluorobenzene	94.0	70-130		%Rec	1	10/11/2022 11:17:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	10/12/2022 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 **2210378**

Date Reported: **10/19/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-21 2'

Project: Papas Fritas 27 CTB1

Collection Date: 10/5/2022 12:00:00 PM

Lab ID: 2210378-006

Matrix: SOIL

Received Date: 10/7/2022 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	10/12/2022 9:27:43 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	10/12/2022 9:27:43 PM
Surr: DNOP	85.3	21-129		%Rec	1	10/12/2022 9:27:43 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	10/11/2022 11:36:00 PM
Surr: BFB	94.6	37.7-212		%Rec	1	10/11/2022 11:36:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.023		mg/Kg	1	10/11/2022 11:36:00 PM
Toluene	ND	0.046		mg/Kg	1	10/11/2022 11:36:00 PM
Ethylbenzene	ND	0.046		mg/Kg	1	10/11/2022 11:36:00 PM
Xylenes, Total	ND	0.093		mg/Kg	1	10/11/2022 11:36:00 PM
Surr: 4-Bromofluorobenzene	93.9	70-130		%Rec	1	10/11/2022 11:36:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	160	60		mg/Kg	20	10/12/2022 6:47:14 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 **2210378**

Date Reported: **10/19/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-22 2'

Project: Papas Fritas 27 CTB1

Collection Date: 10/5/2022 12:10:00 PM

Lab ID: 2210378-007

Matrix: SOIL

Received Date: 10/7/2022 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	10/12/2022 9:38:17 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	10/12/2022 9:38:17 PM
Surr: DNOP	65.6	21-129		%Rec	1	10/12/2022 9:38:17 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/12/2022 12:16:00 AM
Surr: BFB	95.3	37.7-212		%Rec	1	10/12/2022 12:16:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.024		mg/Kg	1	10/12/2022 12:16:00 AM
Toluene	ND	0.048		mg/Kg	1	10/12/2022 12:16:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	10/12/2022 12:16:00 AM
Xylenes, Total	ND	0.095		mg/Kg	1	10/12/2022 12:16:00 AM
Surr: 4-Bromofluorobenzene	94.1	70-130		%Rec	1	10/12/2022 12:16:00 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	250	60		mg/Kg	20	10/12/2022 6:59:35 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 2210378

Date Reported: 10/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-23 2'

Project: Papas Fritas 27 CTB1

Collection Date: 10/5/2022 12:20:00 PM

Lab ID: 2210378-008

Matrix: SOIL

Received Date: 10/7/2022 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	10/12/2022 9:48:47 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/12/2022 9:48:47 PM
Surr: DNOP	79.1	21-129		%Rec	1	10/12/2022 9:48:47 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/12/2022 12:35:00 AM
Surr: BFB	94.8	37.7-212		%Rec	1	10/12/2022 12:35:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.023		mg/Kg	1	10/12/2022 12:35:00 AM
Toluene	ND	0.047		mg/Kg	1	10/12/2022 12:35:00 AM
Ethylbenzene	ND	0.047		mg/Kg	1	10/12/2022 12:35:00 AM
Xylenes, Total	ND	0.093		mg/Kg	1	10/12/2022 12:35:00 AM
Surr: 4-Bromofluorobenzene	94.3	70-130		%Rec	1	10/12/2022 12:35:00 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	1400	61		mg/Kg	20	10/12/2022 7:11:56 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 **2210378**

Date Reported: **10/19/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-24 2'

Project: Papas Fritas 27 CTB1

Collection Date: 10/5/2022 12:30:00 PM

Lab ID: 2210378-009

Matrix: SOIL

Received Date: 10/7/2022 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	10/12/2022 9:59:16 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/12/2022 9:59:16 PM
Surr: DNOP	75.6	21-129		%Rec	1	10/12/2022 9:59:16 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/12/2022 12:55:00 AM
Surr: BFB	95.5	37.7-212		%Rec	1	10/12/2022 12:55:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.025		mg/Kg	1	10/12/2022 12:55:00 AM
Toluene	ND	0.049		mg/Kg	1	10/12/2022 12:55:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	10/12/2022 12:55:00 AM
Xylenes, Total	ND	0.099		mg/Kg	1	10/12/2022 12:55:00 AM
Surr: 4-Bromofluorobenzene	94.1	70-130		%Rec	1	10/12/2022 12:55:00 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	10/12/2022 7:24:17 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 **2210378**

Date Reported: **10/19/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-32 2'

Project: Papas Fritas 27 CTB1

Collection Date: 10/5/2022 12:35:00 PM

Lab ID: 2210378-010

Matrix: SOIL

Received Date: 10/7/2022 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	10/12/2022 10:09:49 PM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	10/12/2022 10:09:49 PM
Surr: DNOP	64.9	21-129		%Rec	1	10/12/2022 10:09:49 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/12/2022 1:15:00 AM
Surr: BFB	90.6	37.7-212		%Rec	1	10/12/2022 1:15:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.024		mg/Kg	1	10/12/2022 1:15:00 AM
Toluene	ND	0.048		mg/Kg	1	10/12/2022 1:15:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	10/12/2022 1:15:00 AM
Xylenes, Total	ND	0.095		mg/Kg	1	10/12/2022 1:15:00 AM
Surr: 4-Bromofluorobenzene	92.4	70-130		%Rec	1	10/12/2022 1:15:00 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	210	61		mg/Kg	20	10/12/2022 7:36:37 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 **2210378**

Date Reported: **10/19/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-33 2'

Project: Papas Fritas 27 CTB1

Collection Date: 10/5/2022 12:40:00 PM

Lab ID: 2210378-011

Matrix: SOIL

Received Date: 10/7/2022 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	10/12/2022 10:20:23 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/12/2022 10:20:23 PM
Surr: DNOP	68.4	21-129		%Rec	1	10/12/2022 10:20:23 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/12/2022 1:34:00 AM
Surr: BFB	90.9	37.7-212		%Rec	1	10/12/2022 1:34:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.024		mg/Kg	1	10/12/2022 1:34:00 AM
Toluene	ND	0.048		mg/Kg	1	10/12/2022 1:34:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	10/12/2022 1:34:00 AM
Xylenes, Total	ND	0.096		mg/Kg	1	10/12/2022 1:34:00 AM
Surr: 4-Bromofluorobenzene	93.2	70-130		%Rec	1	10/12/2022 1:34:00 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	190	60		mg/Kg	20	10/12/2022 7:48:58 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	

Analytical Report

Lab Order **2210378**

Date Reported: **10/19/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-34 2'

Project: Papas Fritas 27 CTB1

Collection Date: 10/5/2022 12:45:00 PM

Lab ID: 2210378-012

Matrix: SOIL

Received Date: 10/7/2022 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	10/12/2022 10:30:59 PM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	10/12/2022 10:30:59 PM
Surr: DNOP	89.9	21-129		%Rec	1	10/12/2022 10:30:59 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/12/2022 1:54:00 AM
Surr: BFB	93.4	37.7-212		%Rec	1	10/12/2022 1:54:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.023		mg/Kg	1	10/12/2022 1:54:00 AM
Toluene	ND	0.047		mg/Kg	1	10/12/2022 1:54:00 AM
Ethylbenzene	ND	0.047		mg/Kg	1	10/12/2022 1:54:00 AM
Xylenes, Total	ND	0.094		mg/Kg	1	10/12/2022 1:54:00 AM
Surr: 4-Bromofluorobenzene	94.9	70-130		%Rec	1	10/12/2022 1:54:00 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	420	60		mg/Kg	20	10/12/2022 8:01:19 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	

Analytical Report

Lab Order **2210378**

Date Reported: **10/19/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-39 2'

Project: Papas Fritas 27 CTB1

Collection Date: 10/5/2022 12:55:00 PM

Lab ID: 2210378-013

Matrix: SOIL

Received Date: 10/7/2022 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	10/12/2022 10:41:36 PM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	10/12/2022 10:41:36 PM
Surr: DNOP	66.2	21-129		%Rec	1	10/12/2022 10:41:36 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/12/2022 2:14:00 AM
Surr: BFB	91.0	37.7-212		%Rec	1	10/12/2022 2:14:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.024		mg/Kg	1	10/12/2022 2:14:00 AM
Toluene	ND	0.048		mg/Kg	1	10/12/2022 2:14:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	10/12/2022 2:14:00 AM
Xylenes, Total	ND	0.096		mg/Kg	1	10/12/2022 2:14:00 AM
Surr: 4-Bromofluorobenzene	93.5	70-130		%Rec	1	10/12/2022 2:14:00 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	10/12/2022 8:13:40 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 **2210378**

Date Reported: **10/19/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-40 2'

Project: Papas Fritas 27 CTB1

Collection Date: 10/5/2022 1:00:00 PM

Lab ID: 2210378-014

Matrix: SOIL

Received Date: 10/7/2022 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	10/12/2022 10:52:14 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	10/12/2022 10:52:14 PM
Surr: DNOP	86.3	21-129		%Rec	1	10/12/2022 10:52:14 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/12/2022 2:34:00 AM
Surr: BFB	92.2	37.7-212		%Rec	1	10/12/2022 2:34:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.023		mg/Kg	1	10/12/2022 2:34:00 AM
Toluene	ND	0.047		mg/Kg	1	10/12/2022 2:34:00 AM
Ethylbenzene	ND	0.047		mg/Kg	1	10/12/2022 2:34:00 AM
Xylenes, Total	ND	0.093		mg/Kg	1	10/12/2022 2:34:00 AM
Surr: 4-Bromofluorobenzene	97.8	70-130		%Rec	1	10/12/2022 2:34:00 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	10/13/2022 12:45:07 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 **2210378**

Date Reported: **10/19/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-43 2'

Project: Papas Fritas 27 CTB1

Collection Date: 10/5/2022 1:15:00 PM

Lab ID: 2210378-015

Matrix: SOIL

Received Date: 10/7/2022 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	10/12/2022 11:02:54 PM
Motor Oil Range Organics (MRO)	ND	42		mg/Kg	1	10/12/2022 11:02:54 PM
Surr: DNOP	76.7	21-129		%Rec	1	10/12/2022 11:02:54 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/12/2022 2:53:00 AM
Surr: BFB	90.7	37.7-212		%Rec	1	10/12/2022 2:53:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.025		mg/Kg	1	10/12/2022 2:53:00 AM
Toluene	ND	0.050		mg/Kg	1	10/12/2022 2:53:00 AM
Ethylbenzene	ND	0.050		mg/Kg	1	10/12/2022 2:53:00 AM
Xylenes, Total	ND	0.10		mg/Kg	1	10/12/2022 2:53:00 AM
Surr: 4-Bromofluorobenzene	93.5	70-130		%Rec	1	10/12/2022 2:53:00 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	580	60		mg/Kg	20	10/13/2022 1:22:10 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 **2210378**

Date Reported: **10/19/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-45 2'

Project: Papas Fritas 27 CTB1

Collection Date: 10/5/2022 1:30:00 PM

Lab ID: 2210378-016

Matrix: SOIL

Received Date: 10/7/2022 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	10/12/2022 11:13:34 PM
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	10/12/2022 11:13:34 PM
Surr: DNOP	90.5	21-129		%Rec	1	10/12/2022 11:13:34 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	10/12/2022 3:13:00 AM
Surr: BFB	91.5	37.7-212		%Rec	1	10/12/2022 3:13:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.023		mg/Kg	1	10/12/2022 3:13:00 AM
Toluene	ND	0.046		mg/Kg	1	10/12/2022 3:13:00 AM
Ethylbenzene	ND	0.046		mg/Kg	1	10/12/2022 3:13:00 AM
Xylenes, Total	ND	0.092		mg/Kg	1	10/12/2022 3:13:00 AM
Surr: 4-Bromofluorobenzene	93.8	70-130		%Rec	1	10/12/2022 3:13:00 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	250	60		mg/Kg	20	10/13/2022 1:59:12 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 **2210378**

Date Reported: **10/19/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-46 2'

Project: Papas Fritas 27 CTB1

Collection Date: 10/5/2022 1:35:00 PM

Lab ID: 2210378-017

Matrix: SOIL

Received Date: 10/7/2022 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	10/12/2022 11:24:16 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	10/12/2022 11:24:16 PM
Surr: DNOP	83.8	21-129		%Rec	1	10/12/2022 11:24:16 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/11/2022 1:15:58 PM
Surr: BFB	86.2	37.7-212		%Rec	1	10/11/2022 1:15:58 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	10/11/2022 1:15:58 PM
Toluene	ND	0.049		mg/Kg	1	10/11/2022 1:15:58 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/11/2022 1:15:58 PM
Xylenes, Total	ND	0.097		mg/Kg	1	10/11/2022 1:15:58 PM
Surr: 4-Bromofluorobenzene	93.7	70-130		%Rec	1	10/11/2022 1:15:58 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	120	60		mg/Kg	20	10/13/2022 2:11:33 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 **2210378**

Date Reported: **10/19/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-47 2'

Project: Papas Fritas 27 CTB1

Collection Date: 10/5/2022 1:40:00 PM

Lab ID: 2210378-018

Matrix: SOIL

Received Date: 10/7/2022 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	10/13/2022 12:07:12 AM
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	10/13/2022 12:07:12 AM
Surr: DNOP	94.2	21-129		%Rec	1	10/13/2022 12:07:12 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/11/2022 2:26:23 PM
Surr: BFB	87.3	37.7-212		%Rec	1	10/11/2022 2:26:23 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	10/11/2022 2:26:23 PM
Toluene	ND	0.049		mg/Kg	1	10/11/2022 2:26:23 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/11/2022 2:26:23 PM
Xylenes, Total	ND	0.098		mg/Kg	1	10/11/2022 2:26:23 PM
Surr: 4-Bromofluorobenzene	93.3	70-130		%Rec	1	10/11/2022 2:26:23 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	240	60		mg/Kg	20	10/13/2022 2:23:53 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	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2210378

19-Oct-22

Client: Vertex Resources Services, Inc.

Project: Papas Fritas 27 CTB1

Sample ID: MB-70775	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 70775	RunNo: 91738								
Prep Date: 10/12/2022	Analysis Date: 10/12/2022	SeqNo: 3290313	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-70775	SampType: ics	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 70775	RunNo: 91738								
Prep Date: 10/12/2022	Analysis Date: 10/12/2022	SeqNo: 3290314	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.0	90	110			

Sample ID: MB-70774	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 70774	RunNo: 91773								
Prep Date: 10/12/2022	Analysis Date: 10/13/2022	SeqNo: 3291389	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-70774	SampType: ics	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 70774	RunNo: 91773								
Prep Date: 10/12/2022	Analysis Date: 10/13/2022	SeqNo: 3291390	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.7	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#: 2210378

19-Oct-22

Client: Vertex Resources Services, Inc.

Project: Papas Fritas 27 CTB1

Sample ID: LCS-70721	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 70721	RunNo: 91700								
Prep Date: 10/11/2022	Analysis Date: 10/11/2022	SeqNo: 3286198	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	3.3		5.000		66.3	21	129			

Sample ID: MB-70721	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 70721	RunNo: 91700								
Prep Date: 10/11/2022	Analysis Date: 10/11/2022	SeqNo: 3286199	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.3		10.00		82.6	21	129			

Sample ID: LCS-70715	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 70715	RunNo: 91700								
Prep Date: 10/10/2022	Analysis Date: 10/11/2022	SeqNo: 3288663	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	32	15	50.00	0	64.5	64.4	127			
Surr: DNOP	3.4		5.000		68.3	21	129			

Sample ID: LCS-70717	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 70717	RunNo: 91700								
Prep Date: 10/10/2022	Analysis Date: 10/11/2022	SeqNo: 3288664	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	35	15	50.00	0	69.6	64.4	127			
Surr: DNOP	3.9		5.000		77.8	21	129			

Sample ID: MB-70715	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 70715	RunNo: 91700								
Prep Date: 10/10/2022	Analysis Date: 10/11/2022	SeqNo: 3288668	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		90.7	21	129			

Sample ID: MB-70717	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 70717	RunNo: 91700								
Prep Date: 10/10/2022	Analysis Date: 10/11/2022	SeqNo: 3288669	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15								

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#: 2210378

19-Oct-22

Client: Vertex Resources Services, Inc.

Project: Papas Fritas 27 CTB1

Sample ID: MB-70717	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 70717	RunNo: 91700								
Prep Date: 10/10/2022	Analysis Date: 10/11/2022	SeqNo: 3288669	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.9		10.00		98.8	21	129			

Sample ID: 2210378-017AMS	SampType: MS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: BES22-46 2'	Batch ID: 70717	RunNo: 91700								
Prep Date: 10/10/2022	Analysis Date: 10/12/2022	SeqNo: 3291181	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	32	13	42.70	0	75.1	36.1	154			
Surr: DNOP	3.4		4.270		80.5	21	129			

Sample ID: 2210378-017AMSD	SampType: MSD	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: BES22-46 2'	Batch ID: 70717	RunNo: 91700								
Prep Date: 10/10/2022	Analysis Date: 10/12/2022	SeqNo: 3291182	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	36	14	48.31	0	73.6	36.1	154	10.4	33.9	
Surr: DNOP	3.9		4.831		81.3	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#: 2210378

19-Oct-22

Client: Vertex Resources Services, Inc.

Project: Papas Fritas 27 CTB1

Sample ID: mb-70714	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 70714		RunNo: 91687							
Prep Date: 10/10/2022	Analysis Date: 10/11/2022		SeqNo: 3286403		Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	860		1000		86.4	37.7	212			

Sample ID: ics-70714	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: 70714		RunNo: 91687							
Prep Date: 10/10/2022	Analysis Date: 10/11/2022		SeqNo: 3286404		Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1700		1000		173	37.7	212			

Sample ID: mb-70712	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 70712		RunNo: 91687							
Prep Date: 10/10/2022	Analysis Date: 10/11/2022		SeqNo: 3286419		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		87.2	37.7	212			

Sample ID: ics-70712	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: 70712		RunNo: 91687							
Prep Date: 10/10/2022	Analysis Date: 10/11/2022		SeqNo: 3286420		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	92.5	72.3	137			
Surr: BFB	1800		1000		178	37.7	212			

Sample ID: 2210378-017ams	SampType: MS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: BES22-46 2'	Batch ID: 70712		RunNo: 91687							
Prep Date: 10/10/2022	Analysis Date: 10/11/2022		SeqNo: 3286422		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	4.9	24.41	0	97.5	70	130			
Surr: BFB	1800		976.6		185	37.7	212			

Sample ID: 2210378-017amsd	SampType: MSD		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: BES22-46 2'	Batch ID: 70712		RunNo: 91687							
Prep Date: 10/10/2022	Analysis Date: 10/11/2022		SeqNo: 3286423		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	29	4.9	24.32	0	118	70	130	18.7	20	
Surr: BFB	2100		972.8		212	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#: 2210378

19-Oct-22

Client: Vertex Resources Services, Inc.

Project: Papas Fritas 27 CTB1

Sample ID: ics-70709	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 70709	RunNo: 91709								
Prep Date: 10/10/2022	Analysis Date: 10/11/2022	SeqNo: 3286520	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	88.4	72.3	137			
Surr: BFB	1900		1000		194	37.7	212			

Sample ID: mb-70709	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 70709	RunNo: 91709								
Prep Date: 10/10/2022	Analysis Date: 10/11/2022	SeqNo: 3286521	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	930		1000		92.9	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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2210378

19-Oct-22

Client: Vertex Resources Services, Inc.

Project: Papas Fritas 27 CTB1

Sample ID: mb-70714	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: 70714		RunNo: 91687							
Prep Date: 10/10/2022	Analysis Date: 10/11/2022		SeqNo: 3286448		Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.92		1.000		92.1	70	130			

Sample ID: LCS-70714	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: 70714		RunNo: 91687							
Prep Date: 10/10/2022	Analysis Date: 10/11/2022		SeqNo: 3286449		Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.94		1.000		93.9	70	130			

Sample ID: mb-70712	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: 70712		RunNo: 91687							
Prep Date: 10/10/2022	Analysis Date: 10/11/2022		SeqNo: 3286464		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		93.0	70	130			

Sample ID: LCS-70712	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: 70712		RunNo: 91687							
Prep Date: 10/10/2022	Analysis Date: 10/11/2022		SeqNo: 3286465		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	104	80	120			
Toluene	1.0	0.050	1.000	0	105	80	120			
Ethylbenzene	1.0	0.050	1.000	0	104	80	120			
Xylenes, Total	3.1	0.10	3.000	0	104	80	120			
Surr: 4-Bromofluorobenzene	0.95		1.000		95.1	70	130			

Sample ID: 2210378-018ams	SampType: MS		TestCode: EPA Method 8021B: Volatiles							
Client ID: BES22-47 2'	Batch ID: 70712		RunNo: 91687							
Prep Date: 10/10/2022	Analysis Date: 10/11/2022		SeqNo: 3286468		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.024	0.9756	0	99.8	68.8	120			
Toluene	0.99	0.049	0.9756	0.01252	99.8	73.6	124			
Ethylbenzene	1.0	0.049	0.9756	0	103	72.7	129			
Xylenes, Total	3.0	0.098	2.927	0.01840	101	75.7	126			

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#: 2210378

19-Oct-22

Client: Vertex Resources Services, Inc.

Project: Papas Fritas 27 CTB1

Sample ID: 2210378-018ams	SampType: MS	TestCode: EPA Method 8021B: Volatiles								
Client ID: BES22-47 2'	Batch ID: 70712	RunNo: 91687								
Prep Date: 10/10/2022	Analysis Date: 10/11/2022	SeqNo: 3286468	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.91		0.9756		93.6	70	130			

Sample ID: 2210378-018amsd	SampType: MSD	TestCode: EPA Method 8021B: Volatiles								
Client ID: BES22-47 2'	Batch ID: 70712	RunNo: 91687								
Prep Date: 10/10/2022	Analysis Date: 10/11/2022	SeqNo: 3286469	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.94	0.024	0.9737	0	96.4	68.8	120	3.70	20	
Toluene	0.95	0.049	0.9737	0.01252	96.0	73.6	124	4.02	20	
Ethylbenzene	0.95	0.049	0.9737	0	97.4	72.7	129	5.33	20	
Xylenes, Total	2.9	0.097	2.921	0.01840	97.0	75.7	126	4.20	20	
Surr: 4-Bromofluorobenzene	0.92		0.9737		94.4	70	130	0	0	

Sample ID: lcs-70709	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 70709	RunNo: 91709								
Prep Date: 10/10/2022	Analysis Date: 10/11/2022	SeqNo: 3286568	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	1.000	0	106	80	120			
Toluene	1.1	0.050	1.000	0	105	80	120			
Ethylbenzene	1.0	0.050	1.000	0	105	80	120			
Xylenes, Total	3.1	0.10	3.000	0	102	80	120			
Surr: 4-Bromofluorobenzene	0.93		1.000		93.2	70	130			

Sample ID: mb-70709	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 70709	RunNo: 91709								
Prep Date: 10/10/2022	Analysis Date: 10/11/2022	SeqNo: 3286569	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	0.95		1.000		95.2	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



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: 2210378 RcptNo: 1

Received By: Juan Rojas 10/7/2022 7:10:00 AM
Completed By: Tracy Casarrubias 10/7/2022 7:50:29 AM
Reviewed By: JN 10/7/22

Chain of Custody

- 1. Is Chain of Custody complete? Yes [checked] No [] Not Present []
2. How was the sample delivered? Courier

Log In

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

of preserved bottles checked for pH:
(<2 or >12 unless noted)
Adjusted?
Checked by: KPC 10.7.22

Special Handling (if applicable)

- 15. Was client notified of all discrepancies with this order? Yes [] No [] NA [checked]

Person Notified: [] Date: []
By Whom: [] Via: [] eMail [] Phone [] Fax [] In Person []
Regarding: []
Client Instructions: []

16. Additional remarks:

17. Cooler Information

Table with 7 columns: Cooler No, Temp °C, Condition, Seal Intact, Seal No, Seal Date, Signed By. Row 1: 1, 1.9, Good, Yes, [], [], []

Chain-of-Custody Record

Client: Vertex (Devon)
 Mailing Address: on file
 Phone #: _____
 Email or Fax#: _____

QA/QC Package:
 Standard Level 4 (Full Validation)
 Accreditation: Az Compliance
 NELAC Other
 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

BTX	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCBs	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl ⁻ , Br ⁻ , NO ₃ ⁻ , NO ₂ ⁻ , PO ₄ ³⁻ , SO ₄ ²⁻	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
-----	----------------------------	---------------------------	--------------------	--------------------------	---------------	---	------------	-----------------	---------------------------------

Turn-Around Time:
 Standard Rush 5 Day
 Project Name:
Papas Fritas 27 CTB1
 Project #:
22 E-01417
 Project Manager:
Kent Stallings
 Sampler: Zach Engubert
 On Ice: Yes No
 # of Coolers: 1
 Cooler Temp (including CF): 1.9-0 = 1.9 (°C)

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
10-5-22	9:45	Soil	BES22-01	1-jar	Ice	2210378-001
10-5-22	10:00		BES22-03	1-jar		002
10-5-22	10:35		BES22-16	1-jar		003
10-5	11:30		BES22-18	1-jar		004
10-5	11:45		BES22-20	1-jar		005
10-5	12:00		BES22-21	1-jar		006
10-5	12:10		BES22-22	1-jar		007
10-5	12:20		BES22-23	1-jar		008
10-5	12:30		BES22-24	1-jar		009
10-5	12:35		BES22-32	1-jar		010
10-5	12:40		BES22-33	1-jar		011
10-5	12:45		BES22-34	1-jar		012

Relinquished by: Zach Engubert
 Date: 10-5-22 Time: 1830
 Relinquished by: MMW
 Date: 10/11/22 Time: 1900

Remarks:
Direct bill to Devon, Dale Woodall
NO # 20976741
1 of 2

Chain-of-Custody Record

Client: Vertex (Devon)

Mailing Address: on file

Phone #:

Email or Fax#:

QA/QC Package:

Standard Level 4 (Full Validation)

Accreditation: Az Compliance

NELAC Other

EDD (Type)

Turn-Around Time:

Standard Rush

5 Days

Project Name:

Papas Fritas 27 CTB 1

Project #:

22E-01417

Project Manager:

Kent Stallings

Sampler: Zach Englebert

On Ice: Yes No

of Coolers: 1

Cooler Temp (including CF): 19-0 = 19 (°C)

Container Type and #

Preservative Type

HEAL No.

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
10-5-22	12:55	soil	BES22-35392	1-jar	ice	2210390
	13:00		BES22-3402	1-jar		013
	13:15		BES22-432	1-jar		014
	13:30		BES22-452	1-jar		015
	13:35		BES22-462	1-jar		016
	13:40		BES22-472	1-jar		017
						018

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 ⁻ , NO ₃ ⁻ , NO ₂ ⁻ , PO ₄ ³⁻ , SO ₄ ²⁻	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
---------------------------	----------------------------	---------------------------	--------------------	--------------------------	---------------	--	------------	-----------------	---------------------------------

Received by: Mummp Date: 10/14/22 Time: 9:00

Relinquished by: Zach Englebert

Date: 10-5-22 Time: 1830

Date: 10/14/22 Time: 1900

Remarks: Direct bill to Devon, Dale Woodall

WO # 20976741

2 of 2



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

October 19, 2022

Kent Stallings

Vertex Resources Services, Inc.

3101 Boyd Drive

Carlsbad, NM 88220

TEL: (505) 506-0040

FAX

RE: Papas Fritas

OrderNo.: 2210428

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 13 sample(s) on 10/8/2022 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 **2210428**

Date Reported: **10/19/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-61 2'

Project: Papas Fritas

Collection Date: 10/6/2022 9:40:00 AM

Lab ID: 2210428-001

Matrix: SOIL

Received Date: 10/8/2022 8:30:00 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	10/12/2022 4:32:32 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/12/2022 4:32:32 AM
Surr: DNOP	81.9	21-129		%Rec	1	10/12/2022 4:32:32 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/12/2022 4:17:38 PM
Surr: BFB	86.9	37.7-212		%Rec	1	10/12/2022 4:17:38 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	10/12/2022 4:17:38 PM
Toluene	ND	0.049		mg/Kg	1	10/12/2022 4:17:38 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/12/2022 4:17:38 PM
Xylenes, Total	ND	0.097		mg/Kg	1	10/12/2022 4:17:38 PM
Surr: 4-Bromofluorobenzene	93.8	70-130		%Rec	1	10/12/2022 4:17:38 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	670	60		mg/Kg	20	10/14/2022 1:19:01 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 **2210428**

Date Reported: **10/19/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-62 2'

Project: Papas Fritas

Collection Date: 10/6/2022 9:50:00 AM

Lab ID: 2210428-002

Matrix: SOIL

Received Date: 10/8/2022 8:30:00 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	10/12/2022 4:43:04 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	10/12/2022 4:43:04 AM
Surr: DNOP	87.2	21-129		%Rec	1	10/12/2022 4:43:04 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/12/2022 4:41:01 PM
Surr: BFB	87.4	37.7-212		%Rec	1	10/12/2022 4:41:01 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	10/12/2022 4:41:01 PM
Toluene	ND	0.049		mg/Kg	1	10/12/2022 4:41:01 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/12/2022 4:41:01 PM
Xylenes, Total	ND	0.097		mg/Kg	1	10/12/2022 4:41:01 PM
Surr: 4-Bromofluorobenzene	94.8	70-130		%Rec	1	10/12/2022 4:41:01 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	340	60		mg/Kg	20	10/14/2022 1:31:25 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 **2210428**

Date Reported: **10/19/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-65 2'

Project: Papas Fritas

Collection Date: 10/6/2022 10:00:00 AM

Lab ID: 2210428-003

Matrix: SOIL

Received Date: 10/8/2022 8:30:00 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	10/12/2022 4:53:35 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/12/2022 4:53:35 AM
Surr: DNOP	89.5	21-129		%Rec	1	10/12/2022 4:53:35 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/12/2022 5:04:25 PM
Surr: BFB	86.5	37.7-212		%Rec	1	10/12/2022 5:04:25 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	10/12/2022 5:04:25 PM
Toluene	ND	0.049		mg/Kg	1	10/12/2022 5:04:25 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/12/2022 5:04:25 PM
Xylenes, Total	ND	0.098		mg/Kg	1	10/12/2022 5:04:25 PM
Surr: 4-Bromofluorobenzene	94.9	70-130		%Rec	1	10/12/2022 5:04:25 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	97	60		mg/Kg	20	10/14/2022 1:43:50 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 **2210428**

Date Reported: **10/19/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-67 2'

Project: Papas Fritas

Collection Date: 10/6/2022 10:05:00 AM

Lab ID: 2210428-004

Matrix: SOIL

Received Date: 10/8/2022 8:30:00 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	10/12/2022 5:04:06 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/12/2022 5:04:06 AM
Surr: DNOP	89.9	21-129		%Rec	1	10/12/2022 5:04:06 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/12/2022 5:28:01 PM
Surr: BFB	84.7	37.7-212		%Rec	1	10/12/2022 5:28:01 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	10/12/2022 5:28:01 PM
Toluene	ND	0.050		mg/Kg	1	10/12/2022 5:28:01 PM
Ethylbenzene	ND	0.050		mg/Kg	1	10/12/2022 5:28:01 PM
Xylenes, Total	ND	0.10		mg/Kg	1	10/12/2022 5:28:01 PM
Surr: 4-Bromofluorobenzene	90.5	70-130		%Rec	1	10/12/2022 5:28:01 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	450	60		mg/Kg	20	10/14/2022 1:56:15 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 **2210428**

Date Reported: **10/19/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-68 2'

Project: Papas Fritas

Collection Date: 10/6/2022 10:10:00 AM

Lab ID: 2210428-005

Matrix: SOIL

Received Date: 10/8/2022 8:30:00 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	10/13/2022 4:20:25 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/13/2022 4:20:25 AM
Surr: DNOP	90.3	21-129		%Rec	1	10/13/2022 4:20:25 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/12/2022 1:57:00 PM
Surr: BFB	88.8	37.7-212		%Rec	1	10/12/2022 1:57:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	10/12/2022 1:57:00 PM
Toluene	ND	0.049		mg/Kg	1	10/12/2022 1:57:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/12/2022 1:57:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	10/12/2022 1:57:00 PM
Surr: 4-Bromofluorobenzene	94.2	70-130		%Rec	1	10/12/2022 1:57:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	460	60		mg/Kg	20	10/14/2022 2:08:40 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 **2210428**

Date Reported: **10/19/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-90 4'

Project: Papas Fritas

Collection Date: 10/6/2022 11:45:00 AM

Lab ID: 2210428-006

Matrix: SOIL

Received Date: 10/8/2022 8:30:00 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	10/13/2022 4:30:57 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/13/2022 4:30:57 AM
Surr: DNOP	99.0	21-129		%Rec	1	10/13/2022 4:30:57 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/12/2022 5:51:24 PM
Surr: BFB	86.4	37.7-212		%Rec	1	10/12/2022 5:51:24 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	10/12/2022 5:51:24 PM
Toluene	ND	0.047		mg/Kg	1	10/12/2022 5:51:24 PM
Ethylbenzene	ND	0.047		mg/Kg	1	10/12/2022 5:51:24 PM
Xylenes, Total	ND	0.095		mg/Kg	1	10/12/2022 5:51:24 PM
Surr: 4-Bromofluorobenzene	93.2	70-130		%Rec	1	10/12/2022 5:51:24 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	10/14/2022 2:21:04 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 **2210428**

Date Reported: **10/19/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-95 4'

Project: Papas Fritas

Collection Date: 10/6/2022 11:55:00 AM

Lab ID: 2210428-007

Matrix: SOIL

Received Date: 10/8/2022 8:30:00 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	10/13/2022 4:41:27 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	10/13/2022 4:41:27 AM
Surr: DNOP	86.6	21-129		%Rec	1	10/13/2022 4:41:27 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/12/2022 6:14:59 PM
Surr: BFB	86.1	37.7-212		%Rec	1	10/12/2022 6:14:59 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	10/12/2022 6:14:59 PM
Toluene	ND	0.050		mg/Kg	1	10/12/2022 6:14:59 PM
Ethylbenzene	ND	0.050		mg/Kg	1	10/12/2022 6:14:59 PM
Xylenes, Total	ND	0.10		mg/Kg	1	10/12/2022 6:14:59 PM
Surr: 4-Bromofluorobenzene	93.1	70-130		%Rec	1	10/12/2022 6:14:59 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	90	59		mg/Kg	20	10/14/2022 2:33:29 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	

Analytical Report

Lab Order **2210428**

Date Reported: **10/19/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-96 4'

Project: Papas Fritas

Collection Date: 10/6/2022 12:00:00 PM

Lab ID: 2210428-008

Matrix: SOIL

Received Date: 10/8/2022 8:30:00 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	10/13/2022 4:51:57 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/13/2022 4:51:57 AM
Surr: DNOP	89.4	21-129		%Rec	1	10/13/2022 4:51:57 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/12/2022 6:38:40 PM
Surr: BFB	83.3	37.7-212		%Rec	1	10/12/2022 6:38:40 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	10/12/2022 6:38:40 PM
Toluene	ND	0.047		mg/Kg	1	10/12/2022 6:38:40 PM
Ethylbenzene	ND	0.047		mg/Kg	1	10/12/2022 6:38:40 PM
Xylenes, Total	ND	0.094		mg/Kg	1	10/12/2022 6:38:40 PM
Surr: 4-Bromofluorobenzene	91.4	70-130		%Rec	1	10/12/2022 6:38:40 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	10/14/2022 2:45:54 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 **2210428**

Date Reported: **10/19/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-102 4'

Project: Papas Fritas

Collection Date: 10/6/2022 12:50:00 PM

Lab ID: 2210428-009

Matrix: SOIL

Received Date: 10/8/2022 8:30:00 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	10/13/2022 5:02:26 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/13/2022 5:02:26 AM
Surr: DNOP	79.4	21-129		%Rec	1	10/13/2022 5:02:26 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/12/2022 7:02:04 PM
Surr: BFB	86.1	37.7-212		%Rec	1	10/12/2022 7:02:04 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	10/12/2022 7:02:04 PM
Toluene	ND	0.047		mg/Kg	1	10/12/2022 7:02:04 PM
Ethylbenzene	ND	0.047		mg/Kg	1	10/12/2022 7:02:04 PM
Xylenes, Total	ND	0.093		mg/Kg	1	10/12/2022 7:02:04 PM
Surr: 4-Bromofluorobenzene	93.3	70-130		%Rec	1	10/12/2022 7:02:04 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	180	60		mg/Kg	20	10/14/2022 2:58:18 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 **2210428**

Date Reported: **10/19/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-104 2'

Project: Papas Fritas

Collection Date: 10/6/2022 12:55:00 PM

Lab ID: 2210428-010

Matrix: SOIL

Received Date: 10/8/2022 8:30:00 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	10/13/2022 5:12:52 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/13/2022 5:12:52 AM
Surr: DNOP	80.5	21-129		%Rec	1	10/13/2022 5:12:52 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/12/2022 7:25:23 PM
Surr: BFB	86.6	37.7-212		%Rec	1	10/12/2022 7:25:23 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	10/12/2022 7:25:23 PM
Toluene	ND	0.048		mg/Kg	1	10/12/2022 7:25:23 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/12/2022 7:25:23 PM
Xylenes, Total	ND	0.096		mg/Kg	1	10/12/2022 7:25:23 PM
Surr: 4-Bromofluorobenzene	93.5	70-130		%Rec	1	10/12/2022 7:25:23 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	410	60		mg/Kg	20	10/14/2022 3:10:43 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 **2210428**

Date Reported: **10/19/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-106 2'

Project: Papas Fritas

Collection Date: 10/6/2022 1:05:00 PM

Lab ID: 2210428-011

Matrix: SOIL

Received Date: 10/8/2022 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: DGH
Diesel Range Organics (DRO)	ND	13		mg/Kg	1	10/13/2022 5:23:23 AM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	10/13/2022 5:23:23 AM
Surr: DNOP	94.6	21-129		%Rec	1	10/13/2022 5:23:23 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/12/2022 7:48:41 PM
Surr: BFB	86.1	37.7-212		%Rec	1	10/12/2022 7:48:41 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	10/12/2022 7:48:41 PM
Toluene	ND	0.049		mg/Kg	1	10/12/2022 7:48:41 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/12/2022 7:48:41 PM
Xylenes, Total	ND	0.099		mg/Kg	1	10/12/2022 7:48:41 PM
Surr: 4-Bromofluorobenzene	93.9	70-130		%Rec	1	10/12/2022 7:48:41 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	150	60		mg/Kg	20	10/14/2022 3:47:57 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	

Analytical Report

Lab Order **2210428**

Date Reported: **10/19/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-108 4'

Project: Papas Fritas

Collection Date: 10/6/2022 1:15:00 PM

Lab ID: 2210428-012

Matrix: SOIL

Received Date: 10/8/2022 8:30:00 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	10/13/2022 5:44:18 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/13/2022 5:44:18 AM
Surr: DNOP	85.9	21-129		%Rec	1	10/13/2022 5:44:18 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/12/2022 8:35:19 PM
Surr: BFB	85.4	37.7-212		%Rec	1	10/12/2022 8:35:19 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	10/12/2022 8:35:19 PM
Toluene	ND	0.047		mg/Kg	1	10/12/2022 8:35:19 PM
Ethylbenzene	ND	0.047		mg/Kg	1	10/12/2022 8:35:19 PM
Xylenes, Total	ND	0.093		mg/Kg	1	10/12/2022 8:35:19 PM
Surr: 4-Bromofluorobenzene	94.1	70-130		%Rec	1	10/12/2022 8:35:19 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	210	60		mg/Kg	20	10/14/2022 4:00:21 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 **2210428**

Date Reported: **10/19/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-109 2'

Project: Papas Fritas

Collection Date: 10/6/2022 1:20:00 PM

Lab ID: 2210428-013

Matrix: SOIL

Received Date: 10/8/2022 8:30:00 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	10/13/2022 5:54:47 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/13/2022 5:54:47 AM
Surr: DNOP	74.4	21-129		%Rec	1	10/13/2022 5:54:47 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/12/2022 8:58:46 PM
Surr: BFB	83.6	37.7-212		%Rec	1	10/12/2022 8:58:46 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	10/12/2022 8:58:46 PM
Toluene	ND	0.047		mg/Kg	1	10/12/2022 8:58:46 PM
Ethylbenzene	ND	0.047		mg/Kg	1	10/12/2022 8:58:46 PM
Xylenes, Total	ND	0.093		mg/Kg	1	10/12/2022 8:58:46 PM
Surr: 4-Bromofluorobenzene	91.7	70-130		%Rec	1	10/12/2022 8:58:46 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	400	60		mg/Kg	20	10/14/2022 4:12:46 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#: 2210428

19-Oct-22

Client: Vertex Resources Services, Inc.

Project: Papas Fritas

Sample ID: MB-70820	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 70820	RunNo: 91800								
Prep Date: 10/13/2022	Analysis Date: 10/13/2022	SeqNo: 3291259	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-70820	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 70820	RunNo: 91800								
Prep Date: 10/13/2022	Analysis Date: 10/13/2022	SeqNo: 3291260	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.9	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#: 2210428

19-Oct-22

Client: Vertex Resources Services, Inc.

Project: Papas Fritas

Sample ID: LCS-70721	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 70721	RunNo: 91700								
Prep Date: 10/11/2022	Analysis Date: 10/11/2022	SeqNo: 3286198	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	33	15	50.00	0	67.0	64.4	127			
Surr: DNOP	3.3		5.000		66.3	21	129			

Sample ID: MB-70721	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 70721	RunNo: 91700								
Prep Date: 10/11/2022	Analysis Date: 10/11/2022	SeqNo: 3286199	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	8.3		10.00		82.6	21	129			

Sample ID: LCS-70717	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 70717	RunNo: 91700								
Prep Date: 10/10/2022	Analysis Date: 10/11/2022	SeqNo: 3288664	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	3.9		5.000		77.8	21	129			

Sample ID: MB-70717	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 70717	RunNo: 91700								
Prep Date: 10/10/2022	Analysis Date: 10/11/2022	SeqNo: 3288669	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.9		10.00		98.8	21	129			

Sample ID: LCS-70748	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 70748	RunNo: 91700								
Prep Date: 10/11/2022	Analysis Date: 10/13/2022	SeqNo: 3291224	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	38	15	50.00	0	75.3	46.9	103			
Surr: DNOP	4.0		5.000		80.2	21	129			

Sample ID: MB-70748	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 70748	RunNo: 91700								
Prep Date: 10/11/2022	Analysis Date: 10/13/2022	SeqNo: 3291225	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15								

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#: 2210428

19-Oct-22

Client: Vertex Resources Services, Inc.

Project: Papas Fritas

Sample ID: MB-70748	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 70748	RunNo: 91700								
Prep Date: 10/11/2022	Analysis Date: 10/13/2022	SeqNo: 3291225	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.9		10.00		98.5	21	129			

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#: 2210428

19-Oct-22

Client: Vertex Resources Services, Inc.

Project: Papas Fritas

Sample ID: mb-70714	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 70714		RunNo: 91687							
Prep Date: 10/10/2022	Analysis Date: 10/11/2022		SeqNo: 3286403		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	860		1000		86.4	37.7	212			

Sample ID: ics-70714	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: 70714		RunNo: 91687							
Prep Date: 10/10/2022	Analysis Date: 10/11/2022		SeqNo: 3286404		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	86.7	72.3	137			
Surr: BFB	1700		1000		173	37.7	212			

Sample ID: mb-70712	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 70712		RunNo: 91687							
Prep Date: 10/10/2022	Analysis Date: 10/11/2022		SeqNo: 3286419		Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	870		1000		87.2	37.7	212			

Sample ID: ics-70712	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: 70712		RunNo: 91687							
Prep Date: 10/10/2022	Analysis Date: 10/11/2022		SeqNo: 3286420		Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1800		1000		178	37.7	212			

Sample ID: mb-70734	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 70734		RunNo: 91747							
Prep Date: 10/11/2022	Analysis Date: 10/12/2022		SeqNo: 3289015		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	880		1000		87.7	37.7	212			

Sample ID: ics-70734	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: 70734		RunNo: 91747							
Prep Date: 10/11/2022	Analysis Date: 10/12/2022		SeqNo: 3289016		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	95.3	72.3	137			
Surr: BFB	1800		1000		184	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#: 2210428

19-Oct-22

Client: Vertex Resources Services, Inc.

Project: Papas Fritas

Sample ID: mb-70714	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 70714	RunNo: 91687								
Prep Date: 10/10/2022	Analysis Date: 10/11/2022	SeqNo: 3286448	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	0.92		1.000		92.1	70	130			

Sample ID: LCS-70714	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 70714	RunNo: 91687								
Prep Date: 10/10/2022	Analysis Date: 10/11/2022	SeqNo: 3286449	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.89	0.025	1.000	0	88.7	80	120			
Toluene	0.90	0.050	1.000	0	89.6	80	120			
Ethylbenzene	0.91	0.050	1.000	0	90.5	80	120			
Xylenes, Total	2.7	0.10	3.000	0	90.3	80	120			
Surr: 4-Bromofluorobenzene	0.94		1.000		93.9	70	130			

Sample ID: mb-70712	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 70712	RunNo: 91687								
Prep Date: 10/10/2022	Analysis Date: 10/11/2022	SeqNo: 3286464	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.93		1.000		93.0	70	130			

Sample ID: LCS-70712	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 70712	RunNo: 91687								
Prep Date: 10/10/2022	Analysis Date: 10/11/2022	SeqNo: 3286465	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.95		1.000		95.1	70	130			

Sample ID: mb-70734	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 70734	RunNo: 91747								
Prep Date: 10/11/2022	Analysis Date: 10/12/2022	SeqNo: 3289053	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								

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#: 2210428

19-Oct-22

Client: Vertex Resources Services, Inc.

Project: Papas Fritas

Sample ID: mb-70734	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 70734	RunNo: 91747								
Prep Date: 10/11/2022	Analysis Date: 10/12/2022	SeqNo: 3289053	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.96		1.000		95.7	70	130			

Sample ID: LCS-70734	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 70734	RunNo: 91747								
Prep Date: 10/11/2022	Analysis Date: 10/12/2022	SeqNo: 3289054	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	96.5	80	120			
Toluene	0.96	0.050	1.000	0	96.5	80	120			
Ethylbenzene	0.96	0.050	1.000	0	96.3	80	120			
Xylenes, Total	2.9	0.10	3.000	0	95.8	80	120			
Surr: 4-Bromofluorobenzene	0.95		1.000		95.1	70	130			

Sample ID: 2210428-005ams	SampType: MS	TestCode: EPA Method 8021B: Volatiles								
Client ID: BES22-68 2'	Batch ID: 70734	RunNo: 91747								
Prep Date: 10/11/2022	Analysis Date: 10/12/2022	SeqNo: 3289062	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.023	0.9355	0	107	68.8	120			
Toluene	1.0	0.047	0.9355	0	107	73.6	124			
Ethylbenzene	1.0	0.047	0.9355	0	109	72.7	129			
Xylenes, Total	3.0	0.094	2.806	0.01816	107	75.7	126			
Surr: 4-Bromofluorobenzene	0.90		0.9355		95.9	70	130			

Sample ID: 2210428-005amsd	SampType: MSD	TestCode: EPA Method 8021B: Volatiles								
Client ID: BES22-68 2'	Batch ID: 70734	RunNo: 91747								
Prep Date: 10/11/2022	Analysis Date: 10/12/2022	SeqNo: 3289063	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.024	0.9434	0	108	68.8	120	2.01	20	
Toluene	1.0	0.047	0.9434	0	109	73.6	124	2.30	20	
Ethylbenzene	1.0	0.047	0.9434	0	109	72.7	129	0.744	20	
Xylenes, Total	3.0	0.094	2.830	0.01816	107	75.7	126	0.697	20	
Surr: 4-Bromofluorobenzene	0.89		0.9434		94.5	70	130	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



Sample Log-In Check List

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

Work Order Number: **2210428**

RcptNo: **1**

Received By: **Cheyenne Cason**

10/8/2022 8:30:00 AM

Cason

Completed By: **Cheyenne Cason**

10/8/2022 9:16:21 AM

Cason

Reviewed By:

JD

10/8

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° 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 10/8/22*

Special Handling (if applicable)

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

Person Notified:	_____	Date:	_____
By Whom:	_____	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> 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	4.9	Good	Not Present			

Chain-of-Custody Record

Client: Vertex (Decon)

Mailing Address: on file

Phone #:

email or Fax#:

QA/QC Package:

Standard Level 4 (Full Validation)

Accreditation: Az Compliance

NELAC Other

EDD (Type)

Turn-Around Time:

Standard Rush 5 Day

Project Name:

Papas Fritas

Project #:

22E-01417

Project Manager:

Kent Stallings

Sampler: FE/SPC

On Ice: Yes No

of Coolers: (

Cooler Temp (including CF): 4.9-0-4.9 (°C)

Container Type and # 1-jar Preservative Type ice HEAL No. 2210428

Date	Time	Matrix	Sample Name
10-6-22	9:40	soil	Papas Fritas BES22-612
	9:50		BES22-62 2'
	10:00		BES22-65 2'
	10:05		BES22-67 2'
	10:10		BES22-68 2'
	11:45		BES22-90 4'
	11:55		BES22-95 4'
	12:00		BES22-96 4'
	12:50		BES22-102 4'
	12:55		BES22-104 2'
	13:05		BES22-106 2'
	13:15		BES22-108 4'

Relinquished by:

Zach Emphre

Time:

5pm

Date:

10/6/22

Relinquished by:

Channing

Time:

9:00

Date:

10/18/22

Received by:

Channing

Date

10/17/22

Via:

Hand

Time

10:30

Received by:

Jim Carr

Date

10/18/22

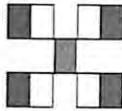
Time

08:30

Remarks:

20976741

1
01
2



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

<input checked="" type="checkbox"/> BTEX / MTBE / TMB's (8021)	
<input checked="" type="checkbox"/> TPH8015D(GRO / DRO / MRO)	
8081 Pesticides/8082 PCB's	
EDB (Method 504.1)	
PAHs by 8310 or 8270SIMS	
RCRA 8 Metals	
Cl ⁻ , Br ⁻ , NO ₃ ⁻ , NO ₂ ⁻ , PO ₄ ³⁻ , SO ₄ ²⁻	
8260 (VOA)	
8270 (Semi-VOA)	
Total Coliform (Present/Absent)	



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

October 21, 2022

Kent Stallings

Vertex Resources Services, Inc.

3101 Boyd Drive

Carlsbad, NM 88220

TEL: (505) 506-0040

FAX

RE: Papas Fritas 27 CTB 1

OrderNo.: 2210467

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 9 sample(s) on 10/11/2022 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 **2210467**

Date Reported: **10/21/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-01 0-2'

Project: Papas Fritas 27 CTB 1

Collection Date: 10/7/2022 9:45:00 AM

Lab ID: 2210467-001

Matrix: SOIL

Received Date: 10/11/2022 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	13		mg/Kg	1	10/13/2022 7:07:55 AM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	10/13/2022 7:07:55 AM
Surr: DNOP	95.2	21-129		%Rec	1	10/13/2022 7:07:55 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/12/2022 9:45:45 PM
Surr: BFB	82.8	37.7-212		%Rec	1	10/12/2022 9:45:45 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	10/12/2022 9:45:45 PM
Toluene	ND	0.048		mg/Kg	1	10/12/2022 9:45:45 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/12/2022 9:45:45 PM
Xylenes, Total	ND	0.095		mg/Kg	1	10/12/2022 9:45:45 PM
Surr: 4-Bromofluorobenzene	91.1	70-130		%Rec	1	10/12/2022 9:45:45 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	10/14/2022 9:55:49 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	

Analytical Report

Lab Order **2210467**

Date Reported: **10/21/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-02 0-2'

Project: Papas Fritas 27 CTB 1

Collection Date: 10/7/2022 9:50:00 AM

Lab ID: 2210467-002

Matrix: SOIL

Received Date: 10/11/2022 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	10/13/2022 7:18:25 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/13/2022 7:18:25 AM
Surr: DNOP	81.3	21-129		%Rec	1	10/13/2022 7:18:25 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/12/2022 10:09:19 PM
Surr: BFB	84.9	37.7-212		%Rec	1	10/12/2022 10:09:19 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	10/12/2022 10:09:19 PM
Toluene	ND	0.048		mg/Kg	1	10/12/2022 10:09:19 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/12/2022 10:09:19 PM
Xylenes, Total	ND	0.097		mg/Kg	1	10/12/2022 10:09:19 PM
Surr: 4-Bromofluorobenzene	92.0	70-130		%Rec	1	10/12/2022 10:09:19 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	59		mg/Kg	20	10/14/2022 10:08:14 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 **2210467**

Date Reported: **10/21/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-12 0-4'

Project: Papas Fritas 27 CTB 1

Collection Date: 10/7/2022 10:05:00 AM

Lab ID: 2210467-003

Matrix: SOIL

Received Date: 10/11/2022 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	13		mg/Kg	1	10/13/2022 7:28:56 AM
Motor Oil Range Organics (MRO)	ND	42		mg/Kg	1	10/13/2022 7:28:56 AM
Surr: DNOP	92.7	21-129		%Rec	1	10/13/2022 7:28:56 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/12/2022 10:32:54 PM
Surr: BFB	82.4	37.7-212		%Rec	1	10/12/2022 10:32:54 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	10/12/2022 10:32:54 PM
Toluene	ND	0.048		mg/Kg	1	10/12/2022 10:32:54 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/12/2022 10:32:54 PM
Xylenes, Total	ND	0.095		mg/Kg	1	10/12/2022 10:32:54 PM
Surr: 4-Bromofluorobenzene	90.8	70-130		%Rec	1	10/12/2022 10:32:54 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	10/14/2022 10:20:38 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	

Analytical Report

Lab Order **2210467**

Date Reported: **10/21/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-17 0-2'

Project: Papas Fritas 27 CTB 1

Collection Date: 10/7/2022 10:15:00 AM

Lab ID: 2210467-004

Matrix: SOIL

Received Date: 10/11/2022 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	13		mg/Kg	1	10/13/2022 7:39:27 AM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	10/13/2022 7:39:27 AM
Surr: DNOP	55.3	21-129		%Rec	1	10/13/2022 7:39:27 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/12/2022 10:56:29 PM
Surr: BFB	85.2	37.7-212		%Rec	1	10/12/2022 10:56:29 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	10/12/2022 10:56:29 PM
Toluene	ND	0.048		mg/Kg	1	10/12/2022 10:56:29 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/12/2022 10:56:29 PM
Xylenes, Total	ND	0.097		mg/Kg	1	10/12/2022 10:56:29 PM
Surr: 4-Bromofluorobenzene	92.9	70-130		%Rec	1	10/12/2022 10:56:29 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	350	60		mg/Kg	20	10/14/2022 10:33:02 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 2210467

Date Reported: 10/21/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-20 0-2'

Project: Papas Fritas 27 CTB 1

Collection Date: 10/7/2022 10:20:00 AM

Lab ID: 2210467-005

Matrix: SOIL

Received Date: 10/11/2022 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	13		mg/Kg	1	10/13/2022 7:49:59 AM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	10/13/2022 7:49:59 AM
Surr: DNOP	82.9	21-129		%Rec	1	10/13/2022 7:49:59 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	10/12/2022 11:20:02 PM
Surr: BFB	84.9	37.7-212		%Rec	1	10/12/2022 11:20:02 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	10/12/2022 11:20:02 PM
Toluene	ND	0.046		mg/Kg	1	10/12/2022 11:20:02 PM
Ethylbenzene	ND	0.046		mg/Kg	1	10/12/2022 11:20:02 PM
Xylenes, Total	ND	0.093		mg/Kg	1	10/12/2022 11:20:02 PM
Surr: 4-Bromofluorobenzene	92.9	70-130		%Rec	1	10/12/2022 11:20:02 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	330	60		mg/Kg	20	10/14/2022 10:45:26 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 **2210467**

Date Reported: **10/21/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-21 0-2'

Project: Papas Fritas 27 CTB 1

Collection Date: 10/7/2022 10:25:00 AM

Lab ID: 2210467-006

Matrix: SOIL

Received Date: 10/11/2022 7:25:00 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	10/14/2022 11:59:32 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/14/2022 11:59:32 AM
Surr: DNOP	117	21-129		%Rec	1	10/14/2022 11:59:32 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/12/2022 12:06:00 PM
Surr: BFB	95.7	37.7-212		%Rec	1	10/12/2022 12:06:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.025		mg/Kg	1	10/12/2022 12:06:00 PM
Toluene	ND	0.050		mg/Kg	1	10/12/2022 12:06:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	10/12/2022 12:06:00 PM
Xylenes, Total	ND	0.10		mg/Kg	1	10/12/2022 12:06:00 PM
Surr: 4-Bromofluorobenzene	96.1	70-130		%Rec	1	10/12/2022 12:06:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	330	60		mg/Kg	20	10/14/2022 10:57:51 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 **2210467**

Date Reported: **10/21/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-30 0-2'

Project: Papas Fritas 27 CTB 1

Collection Date: 10/7/2022 10:35:00 AM

Lab ID: 2210467-007

Matrix: SOIL

Received Date: 10/11/2022 7:25:00 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	10/14/2022 1:10:35 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	10/14/2022 1:10:35 PM
Surr: DNOP	97.2	21-129		%Rec	1	10/14/2022 1:10:35 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/12/2022 1:05:00 PM
Surr: BFB	94.8	37.7-212		%Rec	1	10/12/2022 1:05:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.024		mg/Kg	1	10/12/2022 1:05:00 PM
Toluene	ND	0.047		mg/Kg	1	10/12/2022 1:05:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	10/12/2022 1:05:00 PM
Xylenes, Total	ND	0.095		mg/Kg	1	10/12/2022 1:05:00 PM
Surr: 4-Bromofluorobenzene	94.4	70-130		%Rec	1	10/12/2022 1:05:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	110	59		mg/Kg	20	10/14/2022 11:10:16 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	

Analytical Report

Lab Order **2210467**

Date Reported: **10/21/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-34 0-2'

Project: Papas Fritas 27 CTB 1

Collection Date: 10/7/2022 10:50:00 AM

Lab ID: 2210467-008

Matrix: SOIL

Received Date: 10/11/2022 7:25:00 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	10/14/2022 1:34:13 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	10/14/2022 1:34:13 PM
Surr: DNOP	98.0	21-129		%Rec	1	10/14/2022 1:34:13 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/12/2022 2:24:00 PM
Surr: BFB	96.8	37.7-212		%Rec	1	10/12/2022 2:24:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.024		mg/Kg	1	10/12/2022 2:24:00 PM
Toluene	ND	0.048		mg/Kg	1	10/12/2022 2:24:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/12/2022 2:24:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	10/12/2022 2:24:00 PM
Surr: 4-Bromofluorobenzene	93.7	70-130		%Rec	1	10/12/2022 2:24:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	10/17/2022 11:18:00 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	

Analytical Report

Lab Order **2210467**

Date Reported: **10/21/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-35 0-4'

Project: Papas Fritas 27 CTB 1

Collection Date: 10/7/2022 11:00:00 AM

Lab ID: 2210467-009

Matrix: SOIL

Received Date: 10/11/2022 7:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: SB
Diesel Range Organics (DRO)	ND	13		mg/Kg	1	10/14/2022 1:57:53 PM
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	10/14/2022 1:57:53 PM
Surr: DNOP	122	21-129		%Rec	1	10/14/2022 1:57:53 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: BRM
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	10/12/2022 2:43:00 PM
Surr: BFB	92.5	37.7-212		%Rec	1	10/12/2022 2:43:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: BRM
Benzene	ND	0.023		mg/Kg	1	10/12/2022 2:43:00 PM
Toluene	ND	0.046		mg/Kg	1	10/12/2022 2:43:00 PM
Ethylbenzene	ND	0.046		mg/Kg	1	10/12/2022 2:43:00 PM
Xylenes, Total	ND	0.092		mg/Kg	1	10/12/2022 2:43:00 PM
Surr: 4-Bromofluorobenzene	93.3	70-130		%Rec	1	10/12/2022 2:43:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	300	60		mg/Kg	20	10/17/2022 11:30:20 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	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2210467

21-Oct-22

Client: Vertex Resources Services, Inc.

Project: Papas Fritas 27 CTB 1

Sample ID: MB-70846	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 70846	RunNo: 91834								
Prep Date: 10/14/2022	Analysis Date: 10/14/2022	SeqNo: 3293127	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-70846	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 70846	RunNo: 91834								
Prep Date: 10/14/2022	Analysis Date: 10/14/2022	SeqNo: 3293128	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	96.1	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#: 2210467

21-Oct-22

Client: Vertex Resources Services, Inc.

Project: Papas Fritas 27 CTB 1

Sample ID: LCS-70748	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 70748	RunNo: 91700								
Prep Date: 10/11/2022	Analysis Date: 10/13/2022	SeqNo: 3291224	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	38	15	50.00	0	75.3	46.9	103			
Surr: DNOP	4.0		5.000		80.2	21	129			

Sample ID: MB-70748	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 70748	RunNo: 91700								
Prep Date: 10/11/2022	Analysis Date: 10/13/2022	SeqNo: 3291225	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	9.9		10.00		98.5	21	129			

Sample ID: MB-70822	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 70822	RunNo: 91846								
Prep Date: 10/13/2022	Analysis Date: 10/14/2022	SeqNo: 3293491	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	12		10.00		121	21	129			

Sample ID: LCS-70822	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 70822	RunNo: 91846								
Prep Date: 10/13/2022	Analysis Date: 10/14/2022	SeqNo: 3293492	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51	15	50.00	0	102	64.4	127			
Surr: DNOP	5.2		5.000		104	21	129			

Sample ID: 2210467-006AMS	SampType: MS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: WES22-21 0-2'	Batch ID: 70822	RunNo: 91846								
Prep Date: 10/13/2022	Analysis Date: 10/14/2022	SeqNo: 3293494	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	13	42.70	0	115	36.1	154			
Surr: DNOP	4.7		4.270		109	21	129			

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#: 2210467

21-Oct-22

Client: Vertex Resources Services, Inc.

Project: Papas Fritas 27 CTB 1

Sample ID: 2210467-006AMSD	SampType: MSD	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: WES22-21 0-2'	Batch ID: 70822	RunNo: 91846								
Prep Date: 10/13/2022	Analysis Date: 10/14/2022	SeqNo: 3293495 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	15	49.41	0	92.8	36.1	154	7.23	33.9	
Surr: DNOP	3.9		4.941		78.6	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#: 2210467

21-Oct-22

Client: Vertex Resources Services, Inc.

Project: Papas Fritas 27 CTB 1

Sample ID: mb-70734	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 70734		RunNo: 91747							
Prep Date: 10/11/2022	Analysis Date: 10/12/2022		SeqNo: 3289015		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	880		1000		87.7	37.7	212			

Sample ID: lcs-70734	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: 70734		RunNo: 91747							
Prep Date: 10/11/2022	Analysis Date: 10/12/2022		SeqNo: 3289016		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	95.3	72.3	137			
Surr: BFB	1800		1000		184	37.7	212			

Sample ID: lcs-70739	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: 70739		RunNo: 91729							
Prep Date: 10/11/2022	Analysis Date: 10/12/2022		SeqNo: 3289240		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	94.0	72.3	137			
Surr: BFB	2000		1000		204	37.7	212			

Sample ID: mb-70739	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 70739		RunNo: 91729							
Prep Date: 10/11/2022	Analysis Date: 10/12/2022		SeqNo: 3289241		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	970		1000		97.3	37.7	212			

Sample ID: 2210467-006ams	SampType: MS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: WES22-21 0-2'	Batch ID: 70739		RunNo: 91729							
Prep Date: 10/11/2022	Analysis Date: 10/12/2022		SeqNo: 3289251		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	2200		1000		216	37.7	212			S

Sample ID: 2210467-006amsd	SampType: MSD		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: WES22-21 0-2'	Batch ID: 70739		RunNo: 91729							
Prep Date: 10/11/2022	Analysis Date: 10/12/2022		SeqNo: 3289252		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

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#: 2210467

21-Oct-22

Client: Vertex Resources Services, Inc.

Project: Papas Fritas 27 CTB 1

Sample ID: 2210467-006amsd	SampType: MSD	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: WES22-21 0-2'	Batch ID: 70739	RunNo: 91729								
Prep Date: 10/11/2022	Analysis Date: 10/12/2022	SeqNo: 3289252 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	24.98	0	100	70	130	4.72	20	
Surr: BFB	2200		999.0		218	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#: 2210467

21-Oct-22

Client: Vertex Resources Services, Inc.

Project: Papas Fritas 27 CTB 1

Sample ID: mb-70734	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 70734	RunNo: 91747								
Prep Date: 10/11/2022	Analysis Date: 10/12/2022	SeqNo: 3289053	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	0.96		1.000		95.7	70	130			

Sample ID: LCS-70734	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 70734	RunNo: 91747								
Prep Date: 10/11/2022	Analysis Date: 10/12/2022	SeqNo: 3289054	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	96.5	80	120			
Toluene	0.96	0.050	1.000	0	96.5	80	120			
Ethylbenzene	0.96	0.050	1.000	0	96.3	80	120			
Xylenes, Total	2.9	0.10	3.000	0	95.8	80	120			
Surr: 4-Bromofluorobenzene	0.95		1.000		95.1	70	130			

Sample ID: lcs-70739	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 70739	RunNo: 91729								
Prep Date: 10/11/2022	Analysis Date: 10/12/2022	SeqNo: 3289261	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	1.000	0	111	80	120			
Toluene	1.1	0.050	1.000	0	109	80	120			
Ethylbenzene	1.1	0.050	1.000	0	109	80	120			
Xylenes, Total	3.2	0.10	3.000	0	107	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		100	70	130			

Sample ID: mb-70739	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 70739	RunNo: 91729								
Prep Date: 10/11/2022	Analysis Date: 10/12/2022	SeqNo: 3289262	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	0.96		1.000		96.0	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#: 2210467

21-Oct-22

Client: Vertex Resources Services, Inc.

Project: Papas Fritas 27 CTB 1

Sample ID: 2210467-007ams	SampType: MS	TestCode: EPA Method 8021B: Volatiles								
Client ID: WES22-30 0-2'	Batch ID: 70739	RunNo: 91729								
Prep Date: 10/11/2022	Analysis Date: 10/12/2022	SeqNo: 3289265	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.2	0.024	0.9425	0	122	68.8	120			S
Toluene	1.1	0.047	0.9425	0	121	73.6	124			
Ethylbenzene	1.1	0.047	0.9425	0	122	72.7	129			
Xylenes, Total	3.4	0.094	2.828	0	119	75.7	126			
Surr: 4-Bromofluorobenzene	0.92		0.9425		97.8	70	130			

Sample ID: 2210467-007amsd	SampType: MSD	TestCode: EPA Method 8021B: Volatiles								
Client ID: WES22-30 0-2'	Batch ID: 70739	RunNo: 91729								
Prep Date: 10/11/2022	Analysis Date: 10/12/2022	SeqNo: 3289266	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.023	0.9381	0	118	68.8	120	4.16	20	
Toluene	1.1	0.047	0.9381	0	116	73.6	124	4.45	20	
Ethylbenzene	1.1	0.047	0.9381	0	116	72.7	129	5.08	20	
Xylenes, Total	3.2	0.094	2.814	0	114	75.7	126	4.95	20	
Surr: 4-Bromofluorobenzene	0.92		0.9381		98.1	70	130	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



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: **2210467** RcptNo: 1

Received By: **Juan Rojas** 10/11/2022 7:25:00 AM *Juan Rojas*

Completed By: **Cheyenne Cason** 10/11/2022 8:40:08 AM *Cason*

Reviewed By: *KPC 10/11/22*

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° 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: *juvolo/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	2.0	Good	Not Present			

Chain-of-Custody Record

Client: Vertex (Devon)

Mailing Address: on file

Phone #: _____

email or Fax#: _____

QA/QC Package: Standard Level 4 (Full Validation)

Accreditation: Az Compliance NELAC Other

EDD (Type) _____

Turn-Around Time: Standard Rush 5 Day

Project Name: Papas Fritas 27 CTB 1

Project #: 22E-01417

Project Manager: Kent Stallings

Sampler: SPC

On Ice: Yes No

of Coolers: 1

Cooler Temp (including CF): 2.1-6.1=2.0 (°C)

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
10/7	9:45	Soil	WES22-01 0-2'	4oz jar	ice	2210467
	9:50		WES22-02 0-2'			001
	10:05		WES22-12 0-4'			002
	10:15		WES22-17 0-2'			003
	10:20		WES22-20 0-2'			004
	10:25		WES22-21 0-2'			005
	10:35		WES22-30 0-2'			006
	10:50		WES22-34 0-2'			007
	11:00		WES22-35 2-4'			008
						009

Analysis Request

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

Received by: William Date: 10/10/22 Time: 10:30

Relinquished by: Sally Cortez

Received by: William Date: 10/11/22 Time: 7:25

Relinquished by: William

Remarks: WORK Order # 20976741



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



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

October 24, 2022

Kent Stallings

Vertex Resources Services, Inc.

3101 Boyd Drive

Carlsbad, NM 88220

TEL: (505) 506-0040

FAX:

RE: Papas Fritas 27 CTB 1

OrderNo.: 2210780

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 21 sample(s) on 10/15/2022 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 white background.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order **2210780**

Date Reported: **10/24/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-86 2'

Project: Papas Fritas 27 CTB 1

Collection Date: 10/13/2022 1:00:00 PM

Lab ID: 2210780-001

Matrix: SOIL

Received Date: 10/15/2022 8:40:00 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	10/18/2022 8:32:48 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	10/18/2022 8:32:48 PM
Surr: DNOP	149	21-129	S	%Rec	1	10/18/2022 8:32:48 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/17/2022 1:47:53 PM
Surr: BFB	87.4	37.7-212		%Rec	1	10/17/2022 1:47:53 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	10/17/2022 1:47:53 PM
Toluene	ND	0.050		mg/Kg	1	10/17/2022 1:47:53 PM
Ethylbenzene	ND	0.050		mg/Kg	1	10/17/2022 1:47:53 PM
Xylenes, Total	ND	0.099		mg/Kg	1	10/17/2022 1:47:53 PM
Surr: 4-Bromofluorobenzene	95.8	70-130		%Rec	1	10/17/2022 1:47:53 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	10/17/2022 10:47:19 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	

Analytical Report

Lab Order 2210780

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-87 2'

Project: Papas Fritas 27 CTB 1

Collection Date: 10/13/2022 1:05:00 PM

Lab ID: 2210780-002

Matrix: SOIL

Received Date: 10/15/2022 8:40:00 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	10/18/2022 9:05:14 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/18/2022 9:05:14 PM
Surr: DNOP	151	21-129	S	%Rec	1	10/18/2022 9:05:14 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/17/2022 2:58:08 PM
Surr: BFB	87.2	37.7-212		%Rec	1	10/17/2022 2:58:08 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	10/17/2022 2:58:08 PM
Toluene	ND	0.049		mg/Kg	1	10/17/2022 2:58:08 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/17/2022 2:58:08 PM
Xylenes, Total	ND	0.098		mg/Kg	1	10/17/2022 2:58:08 PM
Surr: 4-Bromofluorobenzene	93.2	70-130		%Rec	1	10/17/2022 2:58:08 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	10/17/2022 10:59:44 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 **2210780**

Date Reported: **10/24/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-88 2'

Project: Papas Fritas 27 CTB 1

Collection Date: 10/13/2022 1:10:00 PM

Lab ID: 2210780-003

Matrix: SOIL

Received Date: 10/15/2022 8:40:00 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	10/18/2022 9:16:00 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/18/2022 9:16:00 PM
Surr: DNOP	93.1	21-129		%Rec	1	10/18/2022 9:16:00 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/17/2022 4:08:36 PM
Surr: BFB	87.7	37.7-212		%Rec	1	10/17/2022 4:08:36 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	10/17/2022 4:08:36 PM
Toluene	ND	0.049		mg/Kg	1	10/17/2022 4:08:36 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/17/2022 4:08:36 PM
Xylenes, Total	ND	0.099		mg/Kg	1	10/17/2022 4:08:36 PM
Surr: 4-Bromofluorobenzene	93.5	70-130		%Rec	1	10/17/2022 4:08:36 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	10/17/2022 8:59:34 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 **2210780**

Date Reported: **10/24/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-89 2'

Project: Papas Fritas 27 CTB 1

Collection Date: 10/13/2022 1:15:00 PM

Lab ID: 2210780-004

Matrix: SOIL

Received Date: 10/15/2022 8:40:00 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	10/18/2022 9:26:44 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/18/2022 9:26:44 PM
Surr: DNOP	138	21-129	S	%Rec	1	10/18/2022 9:26:44 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/17/2022 5:42:59 PM
Surr: BFB	86.9	37.7-212		%Rec	1	10/17/2022 5:42:59 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	10/17/2022 5:42:59 PM
Toluene	ND	0.050		mg/Kg	1	10/17/2022 5:42:59 PM
Ethylbenzene	ND	0.050		mg/Kg	1	10/17/2022 5:42:59 PM
Xylenes, Total	ND	0.10		mg/Kg	1	10/17/2022 5:42:59 PM
Surr: 4-Bromofluorobenzene	94.6	70-130		%Rec	1	10/17/2022 5:42:59 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	10/17/2022 10:01:17 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 **2210780**

Date Reported: **10/24/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-91 2'

Project: Papas Fritas 27 CTB 1

Collection Date: 10/13/2022 1:20:00 PM

Lab ID: 2210780-005

Matrix: SOIL

Received Date: 10/15/2022 8:40:00 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	10/18/2022 9:37:27 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/18/2022 9:37:27 PM
Surr: DNOP	101	21-129		%Rec	1	10/18/2022 9:37:27 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/17/2022 6:06:27 PM
Surr: BFB	85.7	37.7-212		%Rec	1	10/17/2022 6:06:27 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	10/17/2022 6:06:27 PM
Toluene	ND	0.050		mg/Kg	1	10/17/2022 6:06:27 PM
Ethylbenzene	ND	0.050		mg/Kg	1	10/17/2022 6:06:27 PM
Xylenes, Total	ND	0.099		mg/Kg	1	10/17/2022 6:06:27 PM
Surr: 4-Bromofluorobenzene	92.4	70-130		%Rec	1	10/17/2022 6:06:27 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	10/17/2022 10:38:18 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 **2210780**

Date Reported: **10/24/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-92 2'

Project: Papas Fritas 27 CTB 1

Collection Date: 10/13/2022 1:25:00 PM

Lab ID: 2210780-006

Matrix: SOIL

Received Date: 10/15/2022 8:40:00 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	10/18/2022 9:48:09 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	10/18/2022 9:48:09 PM
Surr: DNOP	120	21-129		%Rec	1	10/18/2022 9:48:09 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/17/2022 6:29:52 PM
Surr: BFB	86.9	37.7-212		%Rec	1	10/17/2022 6:29:52 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	10/17/2022 6:29:52 PM
Toluene	ND	0.049		mg/Kg	1	10/17/2022 6:29:52 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/17/2022 6:29:52 PM
Xylenes, Total	ND	0.097		mg/Kg	1	10/17/2022 6:29:52 PM
Surr: 4-Bromofluorobenzene	95.0	70-130		%Rec	1	10/17/2022 6:29:52 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	10/17/2022 10:50:38 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	

Analytical Report

Lab Order **2210780**

Date Reported: **10/24/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-93 2'

Project: Papas Fritas 27 CTB 1

Collection Date: 10/13/2022 1:30:00 PM

Lab ID: 2210780-007

Matrix: SOIL

Received Date: 10/15/2022 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: mb
Diesel Range Organics (DRO)	ND	13		mg/Kg	1	10/18/2022 9:58:50 PM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	10/18/2022 9:58:50 PM
Surr: DNOP	89.5	21-129		%Rec	1	10/18/2022 9:58:50 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/17/2022 6:53:17 PM
Surr: BFB	85.8	37.7-212		%Rec	1	10/17/2022 6:53:17 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	10/17/2022 6:53:17 PM
Toluene	ND	0.049		mg/Kg	1	10/17/2022 6:53:17 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/17/2022 6:53:17 PM
Xylenes, Total	ND	0.099		mg/Kg	1	10/17/2022 6:53:17 PM
Surr: 4-Bromofluorobenzene	93.4	70-130		%Rec	1	10/17/2022 6:53:17 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	10/17/2022 11:02:59 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 **2210780**

Date Reported: **10/24/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-94 2'

Project: Papas Fritas 27 CTB 1

Collection Date: 10/13/2022 1:35:00 PM

Lab ID: 2210780-008

Matrix: SOIL

Received Date: 10/15/2022 8:40:00 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	10/18/2022 10:20:02 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/18/2022 10:20:02 PM
Surr: DNOP	95.2	21-129		%Rec	1	10/18/2022 10:20:02 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/17/2022 7:16:49 PM
Surr: BFB	86.0	37.7-212		%Rec	1	10/17/2022 7:16:49 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	10/17/2022 7:16:49 PM
Toluene	ND	0.049		mg/Kg	1	10/17/2022 7:16:49 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/17/2022 7:16:49 PM
Xylenes, Total	ND	0.098		mg/Kg	1	10/17/2022 7:16:49 PM
Surr: 4-Bromofluorobenzene	93.9	70-130		%Rec	1	10/17/2022 7:16:49 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	10/17/2022 11:15:20 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 **2210780**

Date Reported: **10/24/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-97 2'

Project: Papas Fritas 27 CTB 1

Collection Date: 10/13/2022 1:40:00 PM

Lab ID: 2210780-009

Matrix: SOIL

Received Date: 10/15/2022 8:40:00 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	10/18/2022 10:30:41 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/18/2022 10:30:41 PM
Surr: DNOP	91.8	21-129		%Rec	1	10/18/2022 10:30:41 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/17/2022 7:40:27 PM
Surr: BFB	87.4	37.7-212		%Rec	1	10/17/2022 7:40:27 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	10/17/2022 7:40:27 PM
Toluene	ND	0.048		mg/Kg	1	10/17/2022 7:40:27 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/17/2022 7:40:27 PM
Xylenes, Total	ND	0.096		mg/Kg	1	10/17/2022 7:40:27 PM
Surr: 4-Bromofluorobenzene	95.4	70-130		%Rec	1	10/17/2022 7:40:27 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	10/17/2022 11:27:41 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 **2210780**

Date Reported: **10/24/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-98 2'

Project: Papas Fritas 27 CTB 1

Collection Date: 10/13/2022 1:45:00 PM

Lab ID: 2210780-010

Matrix: SOIL

Received Date: 10/15/2022 8:40:00 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	10/18/2022 10:41:35 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/18/2022 10:41:35 PM
Surr: DNOP	97.4	21-129		%Rec	1	10/18/2022 10:41:35 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/17/2022 8:04:05 PM
Surr: BFB	85.2	37.7-212		%Rec	1	10/17/2022 8:04:05 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	10/17/2022 8:04:05 PM
Toluene	ND	0.049		mg/Kg	1	10/17/2022 8:04:05 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/17/2022 8:04:05 PM
Xylenes, Total	ND	0.098		mg/Kg	1	10/17/2022 8:04:05 PM
Surr: 4-Bromofluorobenzene	92.3	70-130		%Rec	1	10/17/2022 8:04:05 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	10/18/2022 12:04:41 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 **2210780**

Date Reported: **10/24/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-99 2'

Project: Papas Fritas 27 CTB 1

Collection Date: 10/13/2022 1:50:00 PM

Lab ID: 2210780-011

Matrix: SOIL

Received Date: 10/15/2022 8:40:00 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	10/18/2022 10:52:11 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/18/2022 10:52:11 PM
Surr: DNOP	88.0	21-129		%Rec	1	10/18/2022 10:52:11 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/17/2022 8:27:40 PM
Surr: BFB	85.1	37.7-212		%Rec	1	10/17/2022 8:27:40 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	10/17/2022 8:27:40 PM
Toluene	ND	0.048		mg/Kg	1	10/17/2022 8:27:40 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/17/2022 8:27:40 PM
Xylenes, Total	ND	0.096		mg/Kg	1	10/17/2022 8:27:40 PM
Surr: 4-Bromofluorobenzene	92.8	70-130		%Rec	1	10/17/2022 8:27:40 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	10/18/2022 12:17:01 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 **2210780**

Date Reported: **10/24/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-100 2'

Project: Papas Fritas 27 CTB 1

Collection Date: 10/13/2022 1:55:00 PM

Lab ID: 2210780-012

Matrix: SOIL

Received Date: 10/15/2022 8:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: mb
Diesel Range Organics (DRO)	ND	13		mg/Kg	1	10/18/2022 11:02:46 PM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	10/18/2022 11:02:46 PM
Surr: DNOP	95.5	21-129		%Rec	1	10/18/2022 11:02:46 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/17/2022 8:51:15 PM
Surr: BFB	86.0	37.7-212		%Rec	1	10/17/2022 8:51:15 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	10/17/2022 8:51:15 PM
Toluene	ND	0.050		mg/Kg	1	10/17/2022 8:51:15 PM
Ethylbenzene	ND	0.050		mg/Kg	1	10/17/2022 8:51:15 PM
Xylenes, Total	ND	0.099		mg/Kg	1	10/17/2022 8:51:15 PM
Surr: 4-Bromofluorobenzene	93.2	70-130		%Rec	1	10/17/2022 8:51:15 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	10/18/2022 12:29:22 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 **2210780**

Date Reported: **10/24/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-101 4'

Project: Papas Fritas 27 CTB 1

Collection Date: 10/13/2022 2:00:00 PM

Lab ID: 2210780-013

Matrix: SOIL

Received Date: 10/15/2022 8:40:00 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	10/18/2022 11:13:21 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	10/18/2022 11:13:21 PM
Surr: DNOP	97.7	21-129		%Rec	1	10/18/2022 11:13:21 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/17/2022 9:14:40 PM
Surr: BFB	85.0	37.7-212		%Rec	1	10/17/2022 9:14:40 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	10/17/2022 9:14:40 PM
Toluene	ND	0.049		mg/Kg	1	10/17/2022 9:14:40 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/17/2022 9:14:40 PM
Xylenes, Total	ND	0.098		mg/Kg	1	10/17/2022 9:14:40 PM
Surr: 4-Bromofluorobenzene	93.0	70-130		%Rec	1	10/17/2022 9:14:40 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	10/18/2022 12:41:43 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 **2210780**

Date Reported: **10/24/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-103 2'

Project: Papas Fritas 27 CTB 1

Collection Date: 10/13/2022 2:05:00 PM

Lab ID: 2210780-014

Matrix: SOIL

Received Date: 10/15/2022 8:40:00 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	10/18/2022 11:23:54 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/18/2022 11:23:54 PM
Surr: DNOP	102	21-129		%Rec	1	10/18/2022 11:23:54 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/17/2022 10:01:32 PM
Surr: BFB	86.9	37.7-212		%Rec	1	10/17/2022 10:01:32 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	10/17/2022 10:01:32 PM
Toluene	ND	0.047		mg/Kg	1	10/17/2022 10:01:32 PM
Ethylbenzene	ND	0.047		mg/Kg	1	10/17/2022 10:01:32 PM
Xylenes, Total	ND	0.094		mg/Kg	1	10/17/2022 10:01:32 PM
Surr: 4-Bromofluorobenzene	95.3	70-130		%Rec	1	10/17/2022 10:01:32 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	59		mg/Kg	20	10/18/2022 12:54:03 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		

Analytical Report

Lab Order **2210780**

Date Reported: **10/24/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-105 2'

Project: Papas Fritas 27 CTB 1

Collection Date: 10/13/2022 2:10:00 PM

Lab ID: 2210780-015

Matrix: SOIL

Received Date: 10/15/2022 8:40:00 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	10/18/2022 11:34:27 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/18/2022 11:34:27 PM
Surr: DNOP	96.1	21-129		%Rec	1	10/18/2022 11:34:27 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/17/2022 10:25:08 PM
Surr: BFB	85.0	37.7-212		%Rec	1	10/17/2022 10:25:08 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	10/17/2022 10:25:08 PM
Toluene	ND	0.049		mg/Kg	1	10/17/2022 10:25:08 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/17/2022 10:25:08 PM
Xylenes, Total	ND	0.097		mg/Kg	1	10/17/2022 10:25:08 PM
Surr: 4-Bromofluorobenzene	92.6	70-130		%Rec	1	10/17/2022 10:25:08 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	10/18/2022 1:06:25 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 **2210780**

Date Reported: **10/24/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-107 4'

Project: Papas Fritas 27 CTB 1

Collection Date: 10/13/2022 2:15:00 PM

Lab ID: 2210780-016

Matrix: SOIL

Received Date: 10/15/2022 8:40:00 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	10/18/2022 11:44:58 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/18/2022 11:44:58 PM
Surr: DNOP	98.6	21-129		%Rec	1	10/18/2022 11:44:58 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/17/2022 10:48:43 PM
Surr: BFB	86.0	37.7-212		%Rec	1	10/17/2022 10:48:43 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	10/17/2022 10:48:43 PM
Toluene	ND	0.049		mg/Kg	1	10/17/2022 10:48:43 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/17/2022 10:48:43 PM
Xylenes, Total	ND	0.099		mg/Kg	1	10/17/2022 10:48:43 PM
Surr: 4-Bromofluorobenzene	93.6	70-130		%Rec	1	10/17/2022 10:48:43 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	10/18/2022 1:18:45 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	

Analytical Report

Lab Order **2210780**

Date Reported: **10/24/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-110 2'

Project: Papas Fritas 27 CTB 1

Collection Date: 10/13/2022 2:20:00 PM

Lab ID: 2210780-017

Matrix: SOIL

Received Date: 10/15/2022 8:40:00 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	10/18/2022 11:55:29 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/18/2022 11:55:29 PM
Surr: DNOP	94.1	21-129		%Rec	1	10/18/2022 11:55:29 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/17/2022 11:12:11 PM
Surr: BFB	87.0	37.7-212		%Rec	1	10/17/2022 11:12:11 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	10/17/2022 11:12:11 PM
Toluene	ND	0.049		mg/Kg	1	10/17/2022 11:12:11 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/17/2022 11:12:11 PM
Xylenes, Total	ND	0.098		mg/Kg	1	10/17/2022 11:12:11 PM
Surr: 4-Bromofluorobenzene	95.3	70-130		%Rec	1	10/17/2022 11:12:11 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	10/18/2022 1:31:06 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 **2210780**

Date Reported: **10/24/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-111 2'

Project: Papas Fritas 27 CTB 1

Collection Date: 10/13/2022 2:25:00 PM

Lab ID: 2210780-018

Matrix: SOIL

Received Date: 10/15/2022 8:40:00 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	10/19/2022 12:06:02 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	10/19/2022 12:06:02 AM
Surr: DNOP	88.3	21-129		%Rec	1	10/19/2022 12:06:02 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/17/2022 11:35:40 PM
Surr: BFB	88.2	37.7-212		%Rec	1	10/17/2022 11:35:40 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	10/17/2022 11:35:40 PM
Toluene	ND	0.049		mg/Kg	1	10/17/2022 11:35:40 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/17/2022 11:35:40 PM
Xylenes, Total	ND	0.099		mg/Kg	1	10/17/2022 11:35:40 PM
Surr: 4-Bromofluorobenzene	95.3	70-130		%Rec	1	10/17/2022 11:35:40 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	10/18/2022 1:43:26 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		

Analytical Report

Lab Order **2210780**

Date Reported: **10/24/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-112 2'

Project: Papas Fritas 27 CTB 1

Collection Date: 10/13/2022 2:30:00 PM

Lab ID: 2210780-019

Matrix: SOIL

Received Date: 10/15/2022 8:40:00 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	10/19/2022 12:16:34 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	10/19/2022 12:16:34 AM
Surr: DNOP	98.2	21-129		%Rec	1	10/19/2022 12:16:34 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/17/2022 11:59:16 PM
Surr: BFB	86.2	37.7-212		%Rec	1	10/17/2022 11:59:16 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	10/17/2022 11:59:16 PM
Toluene	ND	0.049		mg/Kg	1	10/17/2022 11:59:16 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/17/2022 11:59:16 PM
Xylenes, Total	ND	0.098		mg/Kg	1	10/17/2022 11:59:16 PM
Surr: 4-Bromofluorobenzene	93.5	70-130		%Rec	1	10/17/2022 11:59:16 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	61		mg/Kg	20	10/18/2022 1:55:47 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 **2210780**

Date Reported: **10/24/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-113 2'

Project: Papas Fritas 27 CTB 1

Collection Date: 10/13/2022 2:35:00 PM

Lab ID: 2210780-020

Matrix: SOIL

Received Date: 10/15/2022 8:40:00 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	10/19/2022 12:27:05 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	10/19/2022 12:27:05 AM
Surr: DNOP	101	21-129		%Rec	1	10/19/2022 12:27:05 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/18/2022 12:22:40 AM
Surr: BFB	86.5	37.7-212		%Rec	1	10/18/2022 12:22:40 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	10/18/2022 12:22:40 AM
Toluene	ND	0.048		mg/Kg	1	10/18/2022 12:22:40 AM
Ethylbenzene	ND	0.048		mg/Kg	1	10/18/2022 12:22:40 AM
Xylenes, Total	ND	0.097		mg/Kg	1	10/18/2022 12:22:40 AM
Surr: 4-Bromofluorobenzene	93.7	70-130		%Rec	1	10/18/2022 12:22:40 AM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	10/18/2022 2:32:49 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 **2210780**

Date Reported: **10/24/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-09 1'

Project: Papas Fritas 27 CTB 1

Collection Date: 10/13/2022 2:45:00 PM

Lab ID: 2210780-021

Matrix: SOIL

Received Date: 10/15/2022 8:40:00 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	10/19/2022 11:50:30 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/19/2022 11:50:30 AM
Surr: DNOP	97.4	21-129		%Rec	1	10/19/2022 11:50:30 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/18/2022 11:42:00 AM
Surr: BFB	95.3	37.7-212		%Rec	1	10/18/2022 11:42:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.025		mg/Kg	1	10/18/2022 11:42:00 AM
Toluene	ND	0.050		mg/Kg	1	10/18/2022 11:42:00 AM
Ethylbenzene	ND	0.050		mg/Kg	1	10/18/2022 11:42:00 AM
Xylenes, Total	ND	0.10		mg/Kg	1	10/18/2022 11:42:00 AM
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	10/18/2022 11:42:00 AM
EPA METHOD 300.0: ANIONS						Analyst: CAS
Chloride	ND	60		mg/Kg	20	10/18/2022 8:04:53 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		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2210780

24-Oct-22

Client: Vertex Resources Services, Inc.

Project: Papas Fritas 27 CTB 1

Sample ID: MB-70880	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 70880	RunNo: 91872								
Prep Date: 10/17/2022	Analysis Date: 10/17/2022	SeqNo: 3294593	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-70880	SampType: ics	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 70880	RunNo: 91872								
Prep Date: 10/17/2022	Analysis Date: 10/17/2022	SeqNo: 3294594	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.3	90	110			

Sample ID: MB-70881	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 70881	RunNo: 91844								
Prep Date: 10/17/2022	Analysis Date: 10/17/2022	SeqNo: 3294715	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-70881	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 70881	RunNo: 91844								
Prep Date: 10/17/2022	Analysis Date: 10/17/2022	SeqNo: 3294716	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.2	90	110			

Sample ID: MB-70907	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 70907	RunNo: 91893								
Prep Date: 10/18/2022	Analysis Date: 10/18/2022	SeqNo: 3295883	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-70907	SampType: ics	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 70907	RunNo: 91893								
Prep Date: 10/18/2022	Analysis Date: 10/18/2022	SeqNo: 3295884	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.3	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#: 2210780

24-Oct-22

Client: Vertex Resources Services, Inc.

Project: Papas Fritas 27 CTB 1

Sample ID: LCS-70879	SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: LCSS	Batch ID: 70879		RunNo: 91878							
Prep Date: 10/17/2022	Analysis Date: 10/18/2022		SeqNo: 3294924	Units: %Rec						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	6.0		5.000		121	21	129			

Sample ID: LCSD-70879	SampType: LCSD		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: LCSS02	Batch ID: 70879		RunNo: 91878							
Prep Date: 10/17/2022	Analysis Date: 10/18/2022		SeqNo: 3294925	Units: %Rec						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.7		5.000		113	21	129	0	0	

Sample ID: MB-70879	SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: PBS	Batch ID: 70879		RunNo: 91878							
Prep Date: 10/17/2022	Analysis Date: 10/18/2022		SeqNo: 3294926	Units: %Rec						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	14		10.00		142	21	129			S

Sample ID: LCS-70858	SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: LCSS	Batch ID: 70858		RunNo: 91878							
Prep Date: 10/17/2022	Analysis Date: 10/18/2022		SeqNo: 3295724	Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	68	15	50.00	0	135	64.4	127			S
Surr: DNOP	7.2		5.000		143	21	129			S

Sample ID: MB-70858	SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: PBS	Batch ID: 70858		RunNo: 91878							
Prep Date: 10/17/2022	Analysis Date: 10/18/2022		SeqNo: 3295728	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	12		10.00		115	21	129			

Sample ID: 2210780-001AMS	SampType: MS		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: BES22-86 2'	Batch ID: 70858		RunNo: 91878							
Prep Date: 10/17/2022	Analysis Date: 10/18/2022		SeqNo: 3296140	Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43	14	45.96	0	93.6	36.1	154			
Surr: DNOP	4.5		4.596		98.9	21	129			

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#: 2210780

24-Oct-22

Client: Vertex Resources Services, Inc.

Project: Papas Fritas 27 CTB 1

Sample ID: 2210780-001AMSD	SampType: MSD	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: BES22-86 2'	Batch ID: 70858	RunNo: 91878								
Prep Date: 10/17/2022	Analysis Date: 10/18/2022	SeqNo: 3296141	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	14	45.13	0	99.0	36.1	154	3.78	33.9	
Surr: DNOP	4.6		4.513		103	21	129	0	0	

Sample ID: MB-70909	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 70909	RunNo: 91929								
Prep Date: 10/18/2022	Analysis Date: 10/19/2022	SeqNo: 3297767	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	10		10.00		102	21	129			

Sample ID: LCS-70909	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 70909	RunNo: 91929								
Prep Date: 10/18/2022	Analysis Date: 10/19/2022	SeqNo: 3297768	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	52	15	50.00	0	105	64.4	127			
Surr: DNOP	5.1		5.000		102	21	129			

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#: 2210780

24-Oct-22

Client: Vertex Resources Services, Inc.

Project: Papas Fritas 27 CTB 1

Sample ID: mb-70851	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 70851		RunNo: 91849							
Prep Date: 10/15/2022	Analysis Date: 10/17/2022		SeqNo: 3293599		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	840		1000		83.9	37.7	212			

Sample ID: ics-70851	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: 70851		RunNo: 91849							
Prep Date: 10/15/2022	Analysis Date: 10/17/2022		SeqNo: 3293600		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	99.3	72.3	137			
Surr: BFB	1800		1000		185	37.7	212			

Sample ID: 2210780-001ams	SampType: MS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: BES22-86 2'	Batch ID: 70851		RunNo: 91849							
Prep Date: 10/15/2022	Analysis Date: 10/17/2022		SeqNo: 3293602		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	4.9	24.65	0	98.8	70	130			
Surr: BFB	1900		986.2		189	37.7	212			

Sample ID: 2210780-001amsd	SampType: MSD		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: BES22-86 2'	Batch ID: 70851		RunNo: 91849							
Prep Date: 10/15/2022	Analysis Date: 10/17/2022		SeqNo: 3293603		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	4.9	24.63	0	93.9	70	130	5.25	20	
Surr: BFB	1800		985.2		186	37.7	212	0	0	

Sample ID: ics-70872	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: 70872		RunNo: 91908							
Prep Date: 10/17/2022	Analysis Date: 10/18/2022		SeqNo: 3296480		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	20	5.0	25.00	0	80.3	72.3	137			
Surr: BFB	2000		1000		203	37.7	212			

Sample ID: mb-70872	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 70872		RunNo: 91908							
Prep Date: 10/17/2022	Analysis Date: 10/18/2022		SeqNo: 3296481		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

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#: 2210780

24-Oct-22

Client: Vertex Resources Services, Inc.

Project: Papas Fritas 27 CTB 1

Sample ID: mb-70872	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 70872	RunNo: 91908								
Prep Date: 10/17/2022	Analysis Date: 10/18/2022	SeqNo: 3296481	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		97.6	37.7	212			

Sample ID: 2210780-021ams	SampType: MS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: WES22-09 1'	Batch ID: 70872	RunNo: 91908								
Prep Date: 10/17/2022	Analysis Date: 10/18/2022	SeqNo: 3296483	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	5.0	24.85	0	86.4	70	130			
Surr: BFB	2100		994.0		211	37.7	212			

Sample ID: 2210780-021amsd	SampType: MSD	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: WES22-09 1'	Batch ID: 70872	RunNo: 91908								
Prep Date: 10/17/2022	Analysis Date: 10/18/2022	SeqNo: 3296484	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	24.78	0	87.1	70	130	0.486	20	
Surr: BFB	2100		991.1		214	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#: 2210780

24-Oct-22

Client: Vertex Resources Services, Inc.

Project: Papas Fritas 27 CTB 1

Sample ID: mb-70851	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: 70851		RunNo: 91849							
Prep Date: 10/15/2022	Analysis Date: 10/17/2022		SeqNo: 3293645		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	0.92		1.000		92.2	70	130			

Sample ID: LCS-70851	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: 70851		RunNo: 91849							
Prep Date: 10/15/2022	Analysis Date: 10/17/2022		SeqNo: 3293646		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.025	1.000	0	91.8	80	120			
Toluene	0.94	0.050	1.000	0	94.2	80	120			
Ethylbenzene	0.95	0.050	1.000	0	95.2	80	120			
Xylenes, Total	2.8	0.10	3.000	0	93.7	80	120			
Surr: 4-Bromofluorobenzene	0.96		1.000		96.1	70	130			

Sample ID: 2210780-002ams	SampType: MS		TestCode: EPA Method 8021B: Volatiles							
Client ID: BES22-87 2'	Batch ID: 70851		RunNo: 91849							
Prep Date: 10/15/2022	Analysis Date: 10/17/2022		SeqNo: 3293649		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.025	0.9804	0	92.1	68.8	120			
Toluene	0.94	0.049	0.9804	0.01249	94.8	73.6	124			
Ethylbenzene	0.95	0.049	0.9804	0	97.1	72.7	129			
Xylenes, Total	2.9	0.098	2.941	0.01849	96.9	75.7	126			
Surr: 4-Bromofluorobenzene	0.93		0.9804		95.3	70	130			

Sample ID: 2210780-002amsd	SampType: MSD		TestCode: EPA Method 8021B: Volatiles							
Client ID: BES22-87 2'	Batch ID: 70851		RunNo: 91849							
Prep Date: 10/15/2022	Analysis Date: 10/17/2022		SeqNo: 3293650		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.94	0.025	0.9872	0	95.4	68.8	120	4.22	20	
Toluene	0.98	0.049	0.9872	0.01249	98.4	73.6	124	4.33	20	
Ethylbenzene	1.0	0.049	0.9872	0	102	72.7	129	5.49	20	
Xylenes, Total	3.0	0.099	2.962	0.01849	100	75.7	126	3.94	20	
Surr: 4-Bromofluorobenzene	0.96		0.9872		97.6	70	130	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#: 2210780

24-Oct-22

Client: Vertex Resources Services, Inc.

Project: Papas Fritas 27 CTB 1

Sample ID: ics-70872	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 70872	RunNo: 91908								
Prep Date: 10/17/2022	Analysis Date: 10/18/2022	SeqNo: 3296544	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	1.000	0	109	80	120			
Toluene	1.1	0.050	1.000	0	111	80	120			
Ethylbenzene	1.1	0.050	1.000	0	112	80	120			
Xylenes, Total	3.3	0.10	3.000	0	109	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		106	70	130			

Sample ID: mb-70872	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 70872	RunNo: 91908								
Prep Date: 10/17/2022	Analysis Date: 10/18/2022	SeqNo: 3296545	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	1.1		1.000		107	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



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: 2210780 RcptNo: 1

Received By: Cheyenne Cason 10/15/2022 8:40:00 AM
Completed By: Cheyenne Cason 10/15/2022 9:24:07 AM
Reviewed By: [Signature] 10/15/2022

Chain of Custody

- 1. Is Chain of Custody complete? Yes [checked] No [] Not Present []
2. How was the sample delivered? Courier

Log In

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

of preserved bottles checked for pH:
(<2 or >12 unless noted)
Adjusted?
Checked by: [Signature] 10/15/22

Special Handling (if applicable)

- 15. Was client notified of all discrepancies with this order? Yes [] No [] NA [checked]

Person Notified: [] Date: []
By Whom: [] Via: [] eMail [] Phone [] Fax [] In Person []
Regarding: []
Client Instructions: []

16. Additional remarks:

17. Cooler Information

Table with 7 columns: Cooler No, Temp °C, Condition, Seal Intact, Seal No, Seal Date, Signed By. Row 1: 1, 1.1, Good, Not Present, [], [], []

Chain-of-Custody Record

Client: Devon/Vectix

Mailing Address: OR FILE

Phone #: _____

email or Fax#: _____

QA/QC Package: _____

Standard Level 4 (Full Validation)

Accreditation: Az Compliance Other

NELAC Other

EDD (Type) _____

Turn-Around Time: 2-DAY

Standard Rush

Project Name: PPQS FRI 45 27 CTB 1

Project #: 22E-01417

Project Manager: KCOTZ STAGLINGS

Sampler: CD

On Ice: Yes No

of Coolers: 1

Cooler Temp (including CF): 1.1 - 0.1.1 (°C)

Container Type and # 40Z

Preservative Type ICE

HEAL No. 2210780

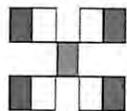
Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
10/13	2:00	SOI	BES22-101 4'	40Z	ICE	013
	2:05		BES22-103 2'			014
	2:10		BES22-105 2'			015
	2:15		BES22-107 4'			016
	2:20		BES22-110 2'			017
	2:25		BES22-111 2'			018
	2:30		BES22-112 2'			019
	2:35		BES22-113 2'			020
	2:45		BES22-09 1'			021

Relinquished by: [Signature] Date: 10/14/22 Time: 1900

Relinquished by: [Signature] Date: 10/15/22 Time: 0840

Received by: [Signature] Date: 10/14/22 Time: 930

Received by: [Signature] Date: 10/15/22 Time: 0840



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

<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 ⁻ , Br ⁻ , NO ₃ ⁻ , NO ₂ ⁻ , PO ₄ ³⁻ , SO ₄ ²⁻	<input type="checkbox"/> 8260 (VOA)	<input type="checkbox"/> 8270 (Semi-VOA)	<input type="checkbox"/> Total Coliform (Present/Absent)
--	--	---	---	---	--	---	-------------------------------------	--	--

Remarks: CC: Chance Dixon
Direct Bill Devon

Chain-of-Custody Record

Client: Devon/Vertex

Mailing Address: ON FILE

Phone #: _____

email or Fax#: _____

QA/QC Package: Standard Level 4 (Full Validation)

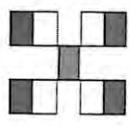
Accreditation: Az Compliance NELAC Other

Sampler: GD

On Ice: Yes No

of Coolers: 1 -0 ± 1.1

Cooler Temp (including CP): 1.1 -0 ± 1.1 (°C)



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

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

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	Cooler Temp (°C)
10/13	1:00	SOIL	BES22-86 Z'	40Z	ICE	2210780	1.1
10/13	1:05		BES22-87 Z'			001	
1:10			BES22-88 Z'			002	
1:15			BES22-89 Z'			003	
1:20			BES22-91 Z'			004	
1:25			BES22-92 Z'			005	
1:30			BES22-93 Z'			006	
1:35			BES22-94 Z'			007	
1:40			BES22-97 Z'			008	
1:45			BES22-98 Z'			009	
1:50			BES22-99 Z'			010	
1:55			BES22-100 Z'			011	
						012	

Received by: [Signature] Date: 10/14/21 Time: 930

Relinquished by: [Signature] Date: 10/14/21 Time: 1900

Received by: Core Center Date: 10/14/21 Time: 0815

Relinquished by: [Signature] Date: 10/14/21 Time: 0815

Remarks: CC: CHANCE DIXON
DIRECT BILL DEVON



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

October 27, 2022

Kent Stallings

Devon Energy

6488 Seven Rivers Highway

Artesia, NM 88210

TEL: (505) 350-1336

FAX:

RE: Papas Fritas 27 CTB1

OrderNo.: 2210837

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 37 sample(s) on 10/18/2022 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 **2210837**

Date Reported: **10/27/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-48 2.5'

Project: Papas Fritas 27 CTB1

Collection Date: 10/14/2022 12:00:00 PM

Lab ID: 2210837-001

Matrix: SOIL

Received Date: 10/18/2022 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	10/20/2022 1:30:33 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/20/2022 1:30:33 AM
Surr: DNOP	104	21-129		%Rec	1	10/20/2022 1:30:33 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/19/2022 11:41:00 AM
Surr: BFB	96.4	37.7-212		%Rec	1	10/19/2022 11:41:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	10/19/2022 11:41:00 AM
Toluene	ND	0.048		mg/Kg	1	10/19/2022 11:41:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	10/19/2022 11:41:00 AM
Xylenes, Total	ND	0.096		mg/Kg	1	10/19/2022 11:41:00 AM
Surr: 4-Bromofluorobenzene	109	70-130		%Rec	1	10/19/2022 11:41:00 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	10/19/2022 10:33:41 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	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2210837**

Date Reported: **10/27/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-49 2.5'

Project: Papas Fritas 27 CTB1

Collection Date: 10/14/2022 12:05:00 PM

Lab ID: 2210837-002

Matrix: SOIL

Received Date: 10/18/2022 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	10/20/2022 2:10:54 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/20/2022 2:10:54 AM
Surr: DNOP	89.9	21-129		%Rec	1	10/20/2022 2:10:54 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/19/2022 12:40:00 PM
Surr: BFB	95.3	37.7-212		%Rec	1	10/19/2022 12:40:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.025		mg/Kg	1	10/19/2022 12:40:00 PM
Toluene	ND	0.050		mg/Kg	1	10/19/2022 12:40:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	10/19/2022 12:40:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	10/19/2022 12:40:00 PM
Surr: 4-Bromofluorobenzene	108	70-130		%Rec	1	10/19/2022 12:40:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	10/19/2022 10:46:06 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	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2210837**

Date Reported: **10/27/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-50 2.5'

Project: Papas Fritas 27 CTB1

Collection Date: 10/14/2022 12:10:00 PM

Lab ID: 2210837-003

Matrix: SOIL

Received Date: 10/18/2022 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	10/20/2022 2:24:21 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/20/2022 2:24:21 AM
Surr: DNOP	103	21-129		%Rec	1	10/20/2022 2:24:21 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	10/19/2022 1:39:00 PM
Surr: BFB	92.3	37.7-212		%Rec	1	10/19/2022 1:39:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.023		mg/Kg	1	10/19/2022 1:39:00 PM
Toluene	ND	0.046		mg/Kg	1	10/19/2022 1:39:00 PM
Ethylbenzene	ND	0.046		mg/Kg	1	10/19/2022 1:39:00 PM
Xylenes, Total	ND	0.092		mg/Kg	1	10/19/2022 1:39:00 PM
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	10/19/2022 1:39:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	10/19/2022 11:23:19 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	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2210837**

Date Reported: **10/27/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-51 2.5'

Project: Papas Fritas 27 CTB1

Collection Date: 10/14/2022 12:15:00 PM

Lab ID: 2210837-004

Matrix: SOIL

Received Date: 10/18/2022 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	10/20/2022 2:37:41 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	10/20/2022 2:37:41 AM
Surr: DNOP	105	21-129		%Rec	1	10/20/2022 2:37:41 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/19/2022 1:58:00 PM
Surr: BFB	91.3	37.7-212		%Rec	1	10/19/2022 1:58:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	10/19/2022 1:58:00 PM
Toluene	ND	0.048		mg/Kg	1	10/19/2022 1:58:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/19/2022 1:58:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	10/19/2022 1:58:00 PM
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	10/19/2022 1:58:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	10/20/2022 12:25:21 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 Above Quantitation Range/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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2210837**

Date Reported: **10/27/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-52 2.5'

Project: Papas Fritas 27 CTB1

Collection Date: 10/14/2022 12:20:00 PM

Lab ID: 2210837-005

Matrix: SOIL

Received Date: 10/18/2022 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	10/20/2022 2:51:04 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	10/20/2022 2:51:04 AM
Surr: DNOP	105	21-129		%Rec	1	10/20/2022 2:51:04 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/19/2022 2:18:00 PM
Surr: BFB	97.0	37.7-212		%Rec	1	10/19/2022 2:18:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	10/19/2022 2:18:00 PM
Toluene	ND	0.048		mg/Kg	1	10/19/2022 2:18:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/19/2022 2:18:00 PM
Xylenes, Total	ND	0.095		mg/Kg	1	10/19/2022 2:18:00 PM
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	10/19/2022 2:18:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	10/20/2022 12:37:45 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	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2210837**

Date Reported: **10/27/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-53 2.5'

Project: Papas Fritas 27 CTB1

Collection Date: 10/14/2022 12:25:00 PM

Lab ID: 2210837-006

Matrix: SOIL

Received Date: 10/18/2022 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	10/20/2022 3:04:18 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/20/2022 3:04:18 AM
Surr: DNOP	105	21-129		%Rec	1	10/20/2022 3:04:18 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/19/2022 2:38:00 PM
Surr: BFB	95.2	37.7-212		%Rec	1	10/19/2022 2:38:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	10/19/2022 2:38:00 PM
Toluene	ND	0.048		mg/Kg	1	10/19/2022 2:38:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/19/2022 2:38:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	10/19/2022 2:38:00 PM
Surr: 4-Bromofluorobenzene	109	70-130		%Rec	1	10/19/2022 2:38:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	10/20/2022 12:50:10 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	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2210837**

Date Reported: **10/27/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-54 2.5'

Project: Papas Fritas 27 CTB1

Collection Date: 10/14/2022 12:30:00 PM

Lab ID: 2210837-007

Matrix: SOIL

Received Date: 10/18/2022 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	10/20/2022 3:17:38 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/20/2022 3:17:38 AM
Surr: DNOP	103	21-129		%Rec	1	10/20/2022 3:17:38 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/19/2022 2:57:00 PM
Surr: BFB	96.5	37.7-212		%Rec	1	10/19/2022 2:57:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	10/19/2022 2:57:00 PM
Toluene	ND	0.049		mg/Kg	1	10/19/2022 2:57:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/19/2022 2:57:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	10/19/2022 2:57:00 PM
Surr: 4-Bromofluorobenzene	107	70-130		%Rec	1	10/19/2022 2:57:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	10/20/2022 1:02:34 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 Above Quantitation Range/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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2210837**

Date Reported: **10/27/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-55 2.5'

Project: Papas Fritas 27 CTB1

Collection Date: 10/14/2022 12:35:00 PM

Lab ID: 2210837-008

Matrix: SOIL

Received Date: 10/18/2022 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	10/20/2022 3:30:56 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/20/2022 3:30:56 AM
Surr: DNOP	100	21-129		%Rec	1	10/20/2022 3:30:56 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/19/2022 3:17:00 PM
Surr: BFB	92.1	37.7-212		%Rec	1	10/19/2022 3:17:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	10/19/2022 3:17:00 PM
Toluene	ND	0.048		mg/Kg	1	10/19/2022 3:17:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/19/2022 3:17:00 PM
Xylenes, Total	ND	0.095		mg/Kg	1	10/19/2022 3:17:00 PM
Surr: 4-Bromofluorobenzene	107	70-130		%Rec	1	10/19/2022 3:17:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	10/20/2022 1:14:59 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	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2210837**

Date Reported: **10/27/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-56 2.5'

Project: Papas Fritas 27 CTB1

Collection Date: 10/14/2022 12:40:00 PM

Lab ID: 2210837-009

Matrix: SOIL

Received Date: 10/18/2022 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	10/20/2022 3:44:10 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/20/2022 3:44:10 AM
Surr: DNOP	102	21-129		%Rec	1	10/20/2022 3:44:10 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	10/19/2022 3:37:00 PM
Surr: BFB	98.6	37.7-212		%Rec	1	10/19/2022 3:37:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.023		mg/Kg	1	10/19/2022 3:37:00 PM
Toluene	ND	0.046		mg/Kg	1	10/19/2022 3:37:00 PM
Ethylbenzene	ND	0.046		mg/Kg	1	10/19/2022 3:37:00 PM
Xylenes, Total	ND	0.093		mg/Kg	1	10/19/2022 3:37:00 PM
Surr: 4-Bromofluorobenzene	111	70-130		%Rec	1	10/19/2022 3:37:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	10/20/2022 1:27:24 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	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2210837**

Date Reported: **10/27/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-57 2.5'

Project: Papas Fritas 27 CTB1

Collection Date: 10/14/2022 12:45:00 PM

Lab ID: 2210837-010

Matrix: SOIL

Received Date: 10/18/2022 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	10/20/2022 3:57:27 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/20/2022 3:57:27 AM
Surr: DNOP	102	21-129		%Rec	1	10/20/2022 3:57:27 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/19/2022 3:57:00 PM
Surr: BFB	97.6	37.7-212		%Rec	1	10/19/2022 3:57:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.025		mg/Kg	1	10/19/2022 3:57:00 PM
Toluene	ND	0.050		mg/Kg	1	10/19/2022 3:57:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	10/19/2022 3:57:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	10/19/2022 3:57:00 PM
Surr: 4-Bromofluorobenzene	110	70-130		%Rec	1	10/19/2022 3:57:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	10/20/2022 1:39:48 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	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2210837**

Date Reported: **10/27/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-58 2.5'

Project: Papas Fritas 27 CTB1

Collection Date: 10/14/2022 12:50:00 PM

Lab ID: 2210837-011

Matrix: SOIL

Received Date: 10/18/2022 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	10/20/2022 4:10:33 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/20/2022 4:10:33 AM
Surr: DNOP	104	21-129		%Rec	1	10/20/2022 4:10:33 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/19/2022 4:36:00 PM
Surr: BFB	90.9	37.7-212		%Rec	1	10/19/2022 4:36:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.023		mg/Kg	1	10/19/2022 4:36:00 PM
Toluene	ND	0.047		mg/Kg	1	10/19/2022 4:36:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	10/19/2022 4:36:00 PM
Xylenes, Total	ND	0.093		mg/Kg	1	10/19/2022 4:36:00 PM
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	10/19/2022 4:36:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	10/20/2022 1:52:12 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 Above Quantitation Range/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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2210837**

Date Reported: **10/27/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-59 2.5'

Project: Papas Fritas 27 CTB1

Collection Date: 10/14/2022 12:55:00 PM

Lab ID: 2210837-012

Matrix: SOIL

Received Date: 10/18/2022 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	10/20/2022 4:23:50 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/20/2022 4:23:50 AM
Surr: DNOP	105	21-129		%Rec	1	10/20/2022 4:23:50 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	10/19/2022 4:55:00 PM
Surr: BFB	94.6	37.7-212		%Rec	1	10/19/2022 4:55:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.023		mg/Kg	1	10/19/2022 4:55:00 PM
Toluene	ND	0.046		mg/Kg	1	10/19/2022 4:55:00 PM
Ethylbenzene	ND	0.046		mg/Kg	1	10/19/2022 4:55:00 PM
Xylenes, Total	ND	0.093		mg/Kg	1	10/19/2022 4:55:00 PM
Surr: 4-Bromofluorobenzene	107	70-130		%Rec	1	10/19/2022 4:55:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	10/20/2022 2:29:24 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	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2210837**

Date Reported: **10/27/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-60 2.5'

Project: Papas Fritas 27 CTB1

Collection Date: 10/14/2022 1:00:00 PM

Lab ID: 2210837-013

Matrix: SOIL

Received Date: 10/18/2022 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	10/20/2022 4:36:56 AM
Motor Oil Range Organics (MRO)	49	47		mg/Kg	1	10/20/2022 4:36:56 AM
Surr: DNOP	104	21-129		%Rec	1	10/20/2022 4:36:56 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/19/2022 5:15:00 PM
Surr: BFB	94.3	37.7-212		%Rec	1	10/19/2022 5:15:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	10/19/2022 5:15:00 PM
Toluene	ND	0.048		mg/Kg	1	10/19/2022 5:15:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/19/2022 5:15:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	10/19/2022 5:15:00 PM
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	10/19/2022 5:15:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	10/20/2022 2:41:49 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	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2210837**

Date Reported: **10/27/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-61 2.5'

Project: Papas Fritas 27 CTB1

Collection Date: 10/14/2022 1:05:00 PM

Lab ID: 2210837-014

Matrix: SOIL

Received Date: 10/18/2022 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	10/20/2022 4:50:05 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/20/2022 4:50:05 AM
Surr: DNOP	105	21-129		%Rec	1	10/20/2022 4:50:05 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/19/2022 5:34:00 PM
Surr: BFB	92.8	37.7-212		%Rec	1	10/19/2022 5:34:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	10/19/2022 5:34:00 PM
Toluene	ND	0.048		mg/Kg	1	10/19/2022 5:34:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/19/2022 5:34:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	10/19/2022 5:34:00 PM
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	10/19/2022 5:34:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	10/20/2022 2:54:13 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	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2210837**

Date Reported: **10/27/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-62 2.5'

Project: Papas Fritas 27 CTB1

Collection Date: 10/14/2022 1:10:00 PM

Lab ID: 2210837-015

Matrix: SOIL

Received Date: 10/18/2022 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	10/20/2022 5:03:11 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/20/2022 5:03:11 AM
Surr: DNOP	98.7	21-129		%Rec	1	10/20/2022 5:03:11 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	10/19/2022 5:54:00 PM
Surr: BFB	97.3	37.7-212		%Rec	1	10/19/2022 5:54:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.023		mg/Kg	1	10/19/2022 5:54:00 PM
Toluene	ND	0.046		mg/Kg	1	10/19/2022 5:54:00 PM
Ethylbenzene	ND	0.046		mg/Kg	1	10/19/2022 5:54:00 PM
Xylenes, Total	ND	0.092		mg/Kg	1	10/19/2022 5:54:00 PM
Surr: 4-Bromofluorobenzene	107	70-130		%Rec	1	10/19/2022 5:54:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	10/20/2022 3:06:37 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	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2210837**

Date Reported: **10/27/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-63 2.5'

Project: Papas Fritas 27 CTB1

Collection Date: 10/14/2022 1:15:00 PM

Lab ID: 2210837-016

Matrix: SOIL

Received Date: 10/18/2022 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	10/20/2022 5:16:14 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/20/2022 5:16:14 AM
Surr: DNOP	102	21-129		%Rec	1	10/20/2022 5:16:14 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/19/2022 6:14:00 PM
Surr: BFB	92.3	37.7-212		%Rec	1	10/19/2022 6:14:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	10/19/2022 6:14:00 PM
Toluene	ND	0.049		mg/Kg	1	10/19/2022 6:14:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/19/2022 6:14:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	10/19/2022 6:14:00 PM
Surr: 4-Bromofluorobenzene	108	70-130		%Rec	1	10/19/2022 6:14:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	10/20/2022 3:19:02 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	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2210837**

Date Reported: **10/27/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-64 2.5'

Project: Papas Fritas 27 CTB1

Collection Date: 10/14/2022 1:20:00 PM

Lab ID: 2210837-017

Matrix: SOIL

Received Date: 10/18/2022 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	10/20/2022 5:29:29 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/20/2022 5:29:29 AM
Surr: DNOP	106	21-129		%Rec	1	10/20/2022 5:29:29 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/19/2022 6:34:00 PM
Surr: BFB	95.8	37.7-212		%Rec	1	10/19/2022 6:34:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	10/19/2022 6:34:00 PM
Toluene	ND	0.047		mg/Kg	1	10/19/2022 6:34:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	10/19/2022 6:34:00 PM
Xylenes, Total	ND	0.094		mg/Kg	1	10/19/2022 6:34:00 PM
Surr: 4-Bromofluorobenzene	107	70-130		%Rec	1	10/19/2022 6:34:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	10/20/2022 3:31:26 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	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2210837**

Date Reported: **10/27/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-66 2.5'

Project: Papas Fritas 27 CTB1

Collection Date: 10/14/2022 1:25:00 PM

Lab ID: 2210837-018

Matrix: SOIL

Received Date: 10/18/2022 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	10/20/2022 5:42:29 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/20/2022 5:42:29 AM
Surr: DNOP	105	21-129		%Rec	1	10/20/2022 5:42:29 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/19/2022 6:53:00 PM
Surr: BFB	97.8	37.7-212		%Rec	1	10/19/2022 6:53:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.025		mg/Kg	1	10/19/2022 6:53:00 PM
Toluene	ND	0.049		mg/Kg	1	10/19/2022 6:53:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/19/2022 6:53:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	10/19/2022 6:53:00 PM
Surr: 4-Bromofluorobenzene	108	70-130		%Rec	1	10/19/2022 6:53:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	10/20/2022 3:43:50 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	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2210837**

Date Reported: **10/27/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-67 2.5'

Project: Papas Fritas 27 CTB1

Collection Date: 10/14/2022 1:30:00 PM

Lab ID: 2210837-019

Matrix: SOIL

Received Date: 10/18/2022 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	10/20/2022 5:55:31 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	10/20/2022 5:55:31 AM
Surr: DNOP	93.0	21-129		%Rec	1	10/20/2022 5:55:31 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/19/2022 7:13:00 PM
Surr: BFB	97.4	37.7-212		%Rec	1	10/19/2022 7:13:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	10/19/2022 7:13:00 PM
Toluene	ND	0.048		mg/Kg	1	10/19/2022 7:13:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/19/2022 7:13:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	10/19/2022 7:13:00 PM
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	10/19/2022 7:13:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	10/20/2022 3:56:15 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	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2210837**

Date Reported: **10/27/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-68 2.5'

Project: Papas Fritas 27 CTB1

Collection Date: 10/14/2022 1:35:00 PM

Lab ID: 2210837-020

Matrix: SOIL

Received Date: 10/18/2022 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	10/20/2022 6:08:17 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/20/2022 6:08:17 AM
Surr: DNOP	93.0	21-129		%Rec	1	10/20/2022 6:08:17 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	10/19/2022 7:33:00 PM
Surr: BFB	87.6	37.7-212		%Rec	1	10/19/2022 7:33:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.023		mg/Kg	1	10/19/2022 7:33:00 PM
Toluene	ND	0.046		mg/Kg	1	10/19/2022 7:33:00 PM
Ethylbenzene	ND	0.046		mg/Kg	1	10/19/2022 7:33:00 PM
Xylenes, Total	ND	0.093		mg/Kg	1	10/19/2022 7:33:00 PM
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	10/19/2022 7:33:00 PM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	59		mg/Kg	20	10/20/2022 4:08:39 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	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2210837**

Date Reported: **10/27/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-69 2.5'

Project: Papas Fritas 27 CTB1

Collection Date: 10/14/2022 1:40:00 PM

Lab ID: 2210837-021

Matrix: SOIL

Received Date: 10/18/2022 7:30:00 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	10/20/2022 12:54:25 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/20/2022 12:54:25 AM
Surr: DNOP	95.7	21-129		%Rec	1	10/20/2022 12:54:25 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/19/2022 9:30:00 PM
Surr: BFB	92.3	37.7-212		%Rec	1	10/19/2022 9:30:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.023		mg/Kg	1	10/19/2022 9:30:00 PM
Toluene	ND	0.047		mg/Kg	1	10/19/2022 9:30:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	10/19/2022 9:30:00 PM
Xylenes, Total	ND	0.094		mg/Kg	1	10/19/2022 9:30:00 PM
Surr: 4-Bromofluorobenzene	107	70-130		%Rec	1	10/19/2022 9:30:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	61		mg/Kg	20	10/20/2022 9:14:42 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	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2210837**

Date Reported: **10/27/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-70 2'

Project: Papas Fritas 27 CTB1

Collection Date: 10/14/2022 9:00:00 AM

Lab ID: 2210837-022

Matrix: SOIL

Received Date: 10/18/2022 7:30:00 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	10/20/2022 2:05:52 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	10/20/2022 2:05:52 AM
Surr: DNOP	96.8	21-129		%Rec	1	10/20/2022 2:05:52 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/19/2022 10:29:00 PM
Surr: BFB	96.9	37.7-212		%Rec	1	10/19/2022 10:29:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	10/19/2022 10:29:00 PM
Toluene	ND	0.048		mg/Kg	1	10/19/2022 10:29:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/19/2022 10:29:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	10/19/2022 10:29:00 PM
Surr: 4-Bromofluorobenzene	112	70-130		%Rec	1	10/19/2022 10:29:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	10/20/2022 9:51:44 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	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2210837**

Date Reported: **10/27/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-71 2'

Project: Papas Fritas 27 CTB1

Collection Date: 10/14/2022 9:05:00 AM

Lab ID: 2210837-023

Matrix: SOIL

Received Date: 10/18/2022 7:30:00 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	10/20/2022 2:29:39 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/20/2022 2:29:39 AM
Surr: DNOP	91.4	21-129		%Rec	1	10/20/2022 2:29:39 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/19/2022 11:28:00 PM
Surr: BFB	94.4	37.7-212		%Rec	1	10/19/2022 11:28:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.025		mg/Kg	1	10/19/2022 11:28:00 PM
Toluene	ND	0.050		mg/Kg	1	10/19/2022 11:28:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	10/19/2022 11:28:00 PM
Xylenes, Total	ND	0.10		mg/Kg	1	10/19/2022 11:28:00 PM
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	10/19/2022 11:28:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	10/20/2022 10:53:25 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	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2210837**

Date Reported: **10/27/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-72 2'

Project: Papas Fritas 27 CTB1

Collection Date: 10/14/2022 9:10:00 AM

Lab ID: 2210837-024

Matrix: SOIL

Received Date: 10/18/2022 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: mb
Diesel Range Organics (DRO)	ND	13		mg/Kg	1	10/20/2022 2:53:25 AM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	10/20/2022 2:53:25 AM
Surr: DNOP	97.0	21-129		%Rec	1	10/20/2022 2:53:25 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/19/2022 11:48:00 PM
Surr: BFB	93.6	37.7-212		%Rec	1	10/19/2022 11:48:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.023		mg/Kg	1	10/19/2022 11:48:00 PM
Toluene	ND	0.047		mg/Kg	1	10/19/2022 11:48:00 PM
Ethylbenzene	ND	0.047		mg/Kg	1	10/19/2022 11:48:00 PM
Xylenes, Total	ND	0.094		mg/Kg	1	10/19/2022 11:48:00 PM
Surr: 4-Bromofluorobenzene	109	70-130		%Rec	1	10/19/2022 11:48:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	10/20/2022 11:05:46 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 Above Quantitation Range/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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2210837**

Date Reported: **10/27/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-73 2'

Project: Papas Fritas 27 CTB1

Collection Date: 10/14/2022 9:15:00 AM

Lab ID: 2210837-025

Matrix: SOIL

Received Date: 10/18/2022 7:30:00 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	10/20/2022 3:17:08 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/20/2022 3:17:08 AM
Surr: DNOP	97.2	21-129		%Rec	1	10/20/2022 3:17:08 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/20/2022 12:08:00 AM
Surr: BFB	103	37.7-212		%Rec	1	10/20/2022 12:08:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	10/20/2022 12:08:00 AM
Toluene	ND	0.047		mg/Kg	1	10/20/2022 12:08:00 AM
Ethylbenzene	ND	0.047		mg/Kg	1	10/20/2022 12:08:00 AM
Xylenes, Total	ND	0.095		mg/Kg	1	10/20/2022 12:08:00 AM
Surr: 4-Bromofluorobenzene	110	70-130		%Rec	1	10/20/2022 12:08:00 AM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	10/20/2022 11:18:07 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	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2210837**

Date Reported: **10/27/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-74 2'

Project: Papas Fritas 27 CTB1

Collection Date: 10/14/2022 9:20:00 AM

Lab ID: 2210837-026

Matrix: SOIL

Received Date: 10/18/2022 7:30:00 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	10/20/2022 3:40:51 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	10/20/2022 3:40:51 AM
Surr: DNOP	97.9	21-129		%Rec	1	10/20/2022 3:40:51 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/20/2022 12:27:00 AM
Surr: BFB	92.2	37.7-212		%Rec	1	10/20/2022 12:27:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	10/20/2022 12:27:00 AM
Toluene	ND	0.048		mg/Kg	1	10/20/2022 12:27:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	10/20/2022 12:27:00 AM
Xylenes, Total	ND	0.095		mg/Kg	1	10/20/2022 12:27:00 AM
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	10/20/2022 12:27:00 AM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	10/20/2022 11:30:28 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	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2210837**

Date Reported: **10/27/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-75 2'

Project: Papas Fritas 27 CTB1

Collection Date: 10/14/2022 9:25:00 AM

Lab ID: 2210837-027

Matrix: SOIL

Received Date: 10/18/2022 7:30:00 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	10/20/2022 4:04:33 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/20/2022 4:04:33 AM
Surr: DNOP	99.3	21-129		%Rec	1	10/20/2022 4:04:33 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/20/2022 12:47:00 AM
Surr: BFB	94.7	37.7-212		%Rec	1	10/20/2022 12:47:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.023		mg/Kg	1	10/20/2022 12:47:00 AM
Toluene	ND	0.047		mg/Kg	1	10/20/2022 12:47:00 AM
Ethylbenzene	ND	0.047		mg/Kg	1	10/20/2022 12:47:00 AM
Xylenes, Total	ND	0.094		mg/Kg	1	10/20/2022 12:47:00 AM
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	10/20/2022 12:47:00 AM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	10/20/2022 11:42:48 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	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2210837**

Date Reported: **10/27/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-76 2'

Project: Papas Fritas 27 CTB1

Collection Date: 10/14/2022 9:30:00 AM

Lab ID: 2210837-028

Matrix: SOIL

Received Date: 10/18/2022 7:30:00 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	10/20/2022 4:28:16 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/20/2022 4:28:16 AM
Surr: DNOP	96.5	21-129		%Rec	1	10/20/2022 4:28:16 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/20/2022 1:07:00 AM
Surr: BFB	94.6	37.7-212		%Rec	1	10/20/2022 1:07:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	10/20/2022 1:07:00 AM
Toluene	ND	0.047		mg/Kg	1	10/20/2022 1:07:00 AM
Ethylbenzene	ND	0.047		mg/Kg	1	10/20/2022 1:07:00 AM
Xylenes, Total	ND	0.095		mg/Kg	1	10/20/2022 1:07:00 AM
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	10/20/2022 1:07:00 AM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	10/20/2022 11:55:08 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	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2210837**

Date Reported: **10/27/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-77 2'

Project: Papas Fritas 27 CTB1

Collection Date: 10/14/2022 9:35:00 AM

Lab ID: 2210837-029

Matrix: SOIL

Received Date: 10/18/2022 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: mb
Diesel Range Organics (DRO)	ND	13		mg/Kg	1	10/20/2022 4:51:55 AM
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	10/20/2022 4:51:55 AM
Surr: DNOP	96.9	21-129		%Rec	1	10/20/2022 4:51:55 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/20/2022 1:26:00 AM
Surr: BFB	92.4	37.7-212		%Rec	1	10/20/2022 1:26:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	10/20/2022 1:26:00 AM
Toluene	ND	0.049		mg/Kg	1	10/20/2022 1:26:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	10/20/2022 1:26:00 AM
Xylenes, Total	ND	0.097		mg/Kg	1	10/20/2022 1:26:00 AM
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	10/20/2022 1:26:00 AM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	10/20/2022 12:07:29 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	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2210837**

Date Reported: **10/27/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-78 2'

Project: Papas Fritas 27 CTB1

Collection Date: 10/14/2022 9:40:00 AM

Lab ID: 2210837-030

Matrix: SOIL

Received Date: 10/18/2022 7:30:00 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	10/20/2022 5:15:31 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/20/2022 5:15:31 AM
Surr: DNOP	100	21-129		%Rec	1	10/20/2022 5:15:31 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/20/2022 1:46:00 AM
Surr: BFB	101	37.7-212		%Rec	1	10/20/2022 1:46:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	10/20/2022 1:46:00 AM
Toluene	ND	0.047		mg/Kg	1	10/20/2022 1:46:00 AM
Ethylbenzene	ND	0.047		mg/Kg	1	10/20/2022 1:46:00 AM
Xylenes, Total	ND	0.095		mg/Kg	1	10/20/2022 1:46:00 AM
Surr: 4-Bromofluorobenzene	108	70-130		%Rec	1	10/20/2022 1:46:00 AM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	10/20/2022 12:19:50 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	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2210837**

Date Reported: **10/27/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-79 2'

Project: Papas Fritas 27 CTB1

Collection Date: 10/14/2022 9:45:00 AM

Lab ID: 2210837-031

Matrix: SOIL

Received Date: 10/18/2022 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: mb
Diesel Range Organics (DRO)	ND	13		mg/Kg	1	10/20/2022 5:39:09 AM
Motor Oil Range Organics (MRO)	ND	42		mg/Kg	1	10/20/2022 5:39:09 AM
Surr: DNOP	100	21-129		%Rec	1	10/20/2022 5:39:09 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/20/2022 2:25:00 AM
Surr: BFB	92.6	37.7-212		%Rec	1	10/20/2022 2:25:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.023		mg/Kg	1	10/20/2022 2:25:00 AM
Toluene	ND	0.047		mg/Kg	1	10/20/2022 2:25:00 AM
Ethylbenzene	ND	0.047		mg/Kg	1	10/20/2022 2:25:00 AM
Xylenes, Total	ND	0.094		mg/Kg	1	10/20/2022 2:25:00 AM
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	10/20/2022 2:25:00 AM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	10/20/2022 12:32:11 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	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2210837**

Date Reported: **10/27/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-80 2'

Project: Papas Fritas 27 CTB1

Collection Date: 10/14/2022 9:50:00 AM

Lab ID: 2210837-032

Matrix: SOIL

Received Date: 10/18/2022 7:30:00 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	10/20/2022 6:02:46 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/20/2022 6:02:46 AM
Surr: DNOP	95.6	21-129		%Rec	1	10/20/2022 6:02:46 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	10/20/2022 2:45:00 AM
Surr: BFB	95.3	37.7-212		%Rec	1	10/20/2022 2:45:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.023		mg/Kg	1	10/20/2022 2:45:00 AM
Toluene	ND	0.046		mg/Kg	1	10/20/2022 2:45:00 AM
Ethylbenzene	ND	0.046		mg/Kg	1	10/20/2022 2:45:00 AM
Xylenes, Total	ND	0.092		mg/Kg	1	10/20/2022 2:45:00 AM
Surr: 4-Bromofluorobenzene	110	70-130		%Rec	1	10/20/2022 2:45:00 AM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	10/20/2022 12:44:32 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	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2210837**

Date Reported: **10/27/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-81 2'

Project: Papas Fritas 27 CTB1

Collection Date: 10/14/2022 9:55:00 AM

Lab ID: 2210837-033

Matrix: SOIL

Received Date: 10/18/2022 7:30:00 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	10/20/2022 6:26:21 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/20/2022 6:26:21 AM
Surr: DNOP	100	21-129		%Rec	1	10/20/2022 6:26:21 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/20/2022 3:05:00 AM
Surr: BFB	97.7	37.7-212		%Rec	1	10/20/2022 3:05:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	10/20/2022 3:05:00 AM
Toluene	ND	0.048		mg/Kg	1	10/20/2022 3:05:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	10/20/2022 3:05:00 AM
Xylenes, Total	ND	0.095		mg/Kg	1	10/20/2022 3:05:00 AM
Surr: 4-Bromofluorobenzene	110	70-130		%Rec	1	10/20/2022 3:05:00 AM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	61		mg/Kg	20	10/20/2022 1:21:33 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 Above Quantitation Range/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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2210837**

Date Reported: **10/27/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-82 2'

Project: Papas Fritas 27 CTB1

Collection Date: 10/14/2022 10:00:00 AM

Lab ID: 2210837-034

Matrix: SOIL

Received Date: 10/18/2022 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: mb
Diesel Range Organics (DRO)	ND	13		mg/Kg	1	10/20/2022 6:49:56 AM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	10/20/2022 6:49:56 AM
Surr: DNOP	92.1	21-129		%Rec	1	10/20/2022 6:49:56 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/20/2022 3:24:00 AM
Surr: BFB	95.0	37.7-212		%Rec	1	10/20/2022 3:24:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	10/20/2022 3:24:00 AM
Toluene	ND	0.048		mg/Kg	1	10/20/2022 3:24:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	10/20/2022 3:24:00 AM
Xylenes, Total	ND	0.095		mg/Kg	1	10/20/2022 3:24:00 AM
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	10/20/2022 3:24:00 AM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	10/20/2022 1:33:53 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	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2210837**

Date Reported: **10/27/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-83 2'

Project: Papas Fritas 27 CTB1

Collection Date: 10/14/2022 10:05:00 AM

Lab ID: 2210837-035

Matrix: SOIL

Received Date: 10/18/2022 7:30:00 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	10/20/2022 7:13:29 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/20/2022 7:13:29 AM
Surr: DNOP	100	21-129		%Rec	1	10/20/2022 7:13:29 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/20/2022 3:44:00 AM
Surr: BFB	94.1	37.7-212		%Rec	1	10/20/2022 3:44:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	10/20/2022 3:44:00 AM
Toluene	ND	0.049		mg/Kg	1	10/20/2022 3:44:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	10/20/2022 3:44:00 AM
Xylenes, Total	ND	0.098		mg/Kg	1	10/20/2022 3:44:00 AM
Surr: 4-Bromofluorobenzene	110	70-130		%Rec	1	10/20/2022 3:44:00 AM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	10/20/2022 1:46:13 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	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2210837**

Date Reported: **10/27/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-84 2'

Project: Papas Fritas 27 CTB1

Collection Date: 10/14/2022 10:10:00 AM

Lab ID: 2210837-036

Matrix: SOIL

Received Date: 10/18/2022 7:30:00 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	10/20/2022 7:37:05 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/20/2022 7:37:05 AM
Surr: DNOP	101	21-129		%Rec	1	10/20/2022 7:37:05 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/20/2022 4:04:00 AM
Surr: BFB	94.2	37.7-212		%Rec	1	10/20/2022 4:04:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	10/20/2022 4:04:00 AM
Toluene	ND	0.048		mg/Kg	1	10/20/2022 4:04:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	10/20/2022 4:04:00 AM
Xylenes, Total	ND	0.096		mg/Kg	1	10/20/2022 4:04:00 AM
Surr: 4-Bromofluorobenzene	111	70-130		%Rec	1	10/20/2022 4:04:00 AM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	60		mg/Kg	20	10/20/2022 1:58:34 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 Above Quantitation Range/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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2210837**

Date Reported: **10/27/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-85 2'

Project: Papas Fritas 27 CTB1

Collection Date: 10/14/2022 10:15:00 AM

Lab ID: 2210837-037

Matrix: SOIL

Received Date: 10/18/2022 7:30:00 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	10/20/2022 8:00:40 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/20/2022 8:00:40 AM
Surr: DNOP	102	21-129		%Rec	1	10/20/2022 8:00:40 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/20/2022 4:23:00 AM
Surr: BFB	95.8	37.7-212		%Rec	1	10/20/2022 4:23:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.023		mg/Kg	1	10/20/2022 4:23:00 AM
Toluene	ND	0.047		mg/Kg	1	10/20/2022 4:23:00 AM
Ethylbenzene	ND	0.047		mg/Kg	1	10/20/2022 4:23:00 AM
Xylenes, Total	ND	0.094		mg/Kg	1	10/20/2022 4:23:00 AM
Surr: 4-Bromofluorobenzene	107	70-130		%Rec	1	10/20/2022 4:23:00 AM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	59		mg/Kg	20	10/20/2022 2:10:55 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	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2210837

27-Oct-22

Client: Devon Energy
Project: Papas Fritas 27 CTB1

Sample ID: MB-70935	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 70935	RunNo: 91941								
Prep Date: 10/19/2022	Analysis Date: 10/19/2022	SeqNo: 3298304	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: MB-70945	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 70945	RunNo: 91958								
Prep Date: 10/20/2022	Analysis Date: 10/20/2022	SeqNo: 3299494	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-70945	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 70945	RunNo: 91958								
Prep Date: 10/20/2022	Analysis Date: 10/20/2022	SeqNo: 3299495	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	96.3	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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/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#: 2210837

27-Oct-22

Client: Devon Energy
Project: Papas Fritas 27 CTB1

Sample ID: MB-70928	SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: PBS	Batch ID: 70928		RunNo: 91929							
Prep Date: 10/19/2022	Analysis Date: 10/20/2022		SeqNo: 3297826		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	9.5		10.00		94.9	21	129			

Sample ID: LCS-70928	SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: LCSS	Batch ID: 70928		RunNo: 91929							
Prep Date: 10/19/2022	Analysis Date: 10/20/2022		SeqNo: 3297827		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	15	50.00	0	95.3	64.4	127			
Surr: DNOP	5.1		5.000		103	21	129			

Sample ID: 2210837-001AMS	SampType: MS		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: BES22-48 2.5'	Batch ID: 70928		RunNo: 91929							
Prep Date: 10/19/2022	Analysis Date: 10/20/2022		SeqNo: 3297829		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	15	49.41	0	99.5	36.1	154			
Surr: DNOP	5.3		4.941		108	21	129			

Sample ID: 2210837-001AMSD	SampType: MSD		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: BES22-48 2.5'	Batch ID: 70928		RunNo: 91929							
Prep Date: 10/19/2022	Analysis Date: 10/20/2022		SeqNo: 3297830		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	14	46.77	0	97.7	36.1	154	7.28	33.9	
Surr: DNOP	5.1		4.677		109	21	129	0	0	

Sample ID: MB-70929	SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: PBS	Batch ID: 70929		RunNo: 91900							
Prep Date: 10/19/2022	Analysis Date: 10/20/2022		SeqNo: 3298010		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		89.9	21	129			

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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/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#: 2210837

27-Oct-22

Client: Devon Energy
Project: Papas Fritas 27 CTB1

Sample ID: LCS-70929	SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: LCSS	Batch ID: 70929		RunNo: 91900							
Prep Date: 10/19/2022	Analysis Date: 10/20/2022		SeqNo: 3298011		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	15	50.00	0	92.3	64.4	127			
Surr: DNOP	4.6		5.000		92.4	21	129			

Sample ID: 2210837-021AMS	SampType: MS		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: BES22-69 2.5'	Batch ID: 70929		RunNo: 91900							
Prep Date: 10/19/2022	Analysis Date: 10/20/2022		SeqNo: 3298013		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	14	46.51	0	100	36.1	154			
Surr: DNOP	4.8		4.651		102	21	129			

Sample ID: 2210837-021AMSD	SampType: MSD		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: BES22-69 2.5'	Batch ID: 70929		RunNo: 91900							
Prep Date: 10/19/2022	Analysis Date: 10/20/2022		SeqNo: 3298014		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	14	45.62	0	99.1	36.1	154	2.82	33.9	
Surr: DNOP	4.6		4.562		101	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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/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#: 2210837

27-Oct-22

Client: Devon Energy
Project: Papas Fritas 27 CTB1

Sample ID: ics-70896	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: 70896		RunNo: 91932							
Prep Date: 10/18/2022	Analysis Date: 10/19/2022		SeqNo: 3298039		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	91.3	72.3	137			
Surr: BFB	2000		1000		202	37.7	212			

Sample ID: mb-70896	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 70896		RunNo: 91932							
Prep Date: 10/18/2022	Analysis Date: 10/19/2022		SeqNo: 3298040		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	930		1000		92.6	37.7	212			

Sample ID: 2210837-001ams	SampType: MS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: BES22-48 2.5'	Batch ID: 70896		RunNo: 91932							
Prep Date: 10/18/2022	Analysis Date: 10/19/2022		SeqNo: 3298042		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	4.8	23.88	0	99.1	70	130			
Surr: BFB	2000		955.1		214	37.7	212			S

Sample ID: 2210837-001amsd	SampType: MSD		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: BES22-48 2.5'	Batch ID: 70896		RunNo: 91932							
Prep Date: 10/18/2022	Analysis Date: 10/19/2022		SeqNo: 3298043		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	4.8	23.90	0	105	70	130	6.24	20	
Surr: BFB	2100		956.0		217	37.7	212	0	0	S

Sample ID: ics-70897	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: 70897		RunNo: 91932							
Prep Date: 10/18/2022	Analysis Date: 10/19/2022		SeqNo: 3298063		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	90.4	72.3	137			
Surr: BFB	2100		1000		205	37.7	212			

Sample ID: MB-70897	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 70897		RunNo: 91932							
Prep Date: 10/18/2022	Analysis Date: 10/19/2022		SeqNo: 3298064		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	90.4	72.3	137			
Surr: BFB	2100		1000		205	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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/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#: 2210837

27-Oct-22

Client: Devon Energy
Project: Papas Fritas 27 CTB1

Sample ID: MB-70897	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 70897		RunNo: 91932							
Prep Date: 10/18/2022	Analysis Date: 10/19/2022		SeqNo: 3298064		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		92.2	37.7	212			

Sample ID: 2210837-021ams	SampType: MS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: BES22-69 2.5'	Batch ID: 70897		RunNo: 91932							
Prep Date: 10/18/2022	Analysis Date: 10/19/2022		SeqNo: 3298066		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	4.7	23.56	0	97.1	70	130			
Surr: BFB	2100		942.5		220	37.7	212			S

Sample ID: 2210837-021amsd	SampType: MSD		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: BES22-69 2.5'	Batch ID: 70897		RunNo: 91932							
Prep Date: 10/18/2022	Analysis Date: 10/19/2022		SeqNo: 3298067		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	4.7	23.50	0	103	70	130	5.17	20	
Surr: BFB	2000		939.8		214	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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/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#: 2210837

27-Oct-22

Client: Devon Energy
Project: Papas Fritas 27 CTB1

Sample ID: ics-70896	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: 70896		RunNo: 91932							
Prep Date: 10/18/2022	Analysis Date: 10/19/2022		SeqNo: 3298093		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.2	0.025	1.000	0	116	80	120			
Toluene	1.1	0.050	1.000	0	115	80	120			
Ethylbenzene	1.1	0.050	1.000	0	115	80	120			
Xylenes, Total	3.4	0.10	3.000	0	113	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		108	70	130			

Sample ID: mb-70896	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: 70896		RunNo: 91932							
Prep Date: 10/18/2022	Analysis Date: 10/19/2022		SeqNo: 3298094		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	1.1		1.000		107	70	130			

Sample ID: 2210837-002ams	SampType: MS		TestCode: EPA Method 8021B: Volatiles							
Client ID: BES22-49 2.5'	Batch ID: 70896		RunNo: 91932							
Prep Date: 10/18/2022	Analysis Date: 10/19/2022		SeqNo: 3298097		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.2	0.025	0.9950	0	125	68.8	120			S
Toluene	1.3	0.050	0.9950	0	127	73.6	124			S
Ethylbenzene	1.3	0.050	0.9950	0	126	72.7	129			
Xylenes, Total	3.7	0.10	2.985	0	124	75.7	126			
Surr: 4-Bromofluorobenzene	1.1		0.9950		106	70	130			

Sample ID: 2210837-002amsd	SampType: MSD		TestCode: EPA Method 8021B: Volatiles							
Client ID: BES22-49 2.5'	Batch ID: 70896		RunNo: 91932							
Prep Date: 10/18/2022	Analysis Date: 10/19/2022		SeqNo: 3298098		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.2	0.025	0.9872	0	125	68.8	120	1.02	20	S
Toluene	1.2	0.049	0.9872	0	125	73.6	124	2.73	20	S
Ethylbenzene	1.2	0.049	0.9872	0	126	72.7	129	1.16	20	
Xylenes, Total	3.7	0.099	2.962	0	123	75.7	126	1.42	20	
Surr: 4-Bromofluorobenzene	1.0		0.9872		105	70	130	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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/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#: 2210837

27-Oct-22

Client: Devon Energy
Project: Papas Fritas 27 CTB1

Sample ID: ics-70897	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: 70897		RunNo: 91932							
Prep Date: 10/18/2022	Analysis Date: 10/19/2022		SeqNo: 3298117		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.2	0.025	1.000	0	120	80	120			S
Toluene	1.2	0.050	1.000	0	120	80	120			
Ethylbenzene	1.2	0.050	1.000	0	119	80	120			
Xylenes, Total	3.5	0.10	3.000	0	118	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		108	70	130			

Sample ID: MB-70897	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: 70897		RunNo: 91932							
Prep Date: 10/18/2022	Analysis Date: 10/19/2022		SeqNo: 3298118		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: 2210837-022ams	SampType: MS		TestCode: EPA Method 8021B: Volatiles							
Client ID: BES22-70 2'	Batch ID: 70897		RunNo: 91932							
Prep Date: 10/18/2022	Analysis Date: 10/19/2022		SeqNo: 3298121		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.3	0.024	0.9690	0	129	68.8	120			S
Toluene	1.3	0.048	0.9690	0	131	73.6	124			S
Ethylbenzene	1.3	0.048	0.9690	0	129	72.7	129			S
Xylenes, Total	3.7	0.097	2.907	0	128	75.7	126			S
Surr: 4-Bromofluorobenzene	1.1		0.9690		109	70	130			

Sample ID: 2210837-022amsd	SampType: MSD		TestCode: EPA Method 8021B: Volatiles							
Client ID: BES22-70 2'	Batch ID: 70897		RunNo: 91932							
Prep Date: 10/18/2022	Analysis Date: 10/19/2022		SeqNo: 3298122		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.3	0.024	0.9560	0	134	68.8	120	2.49	20	S
Toluene	1.3	0.048	0.9560	0	135	73.6	124	2.09	20	S
Ethylbenzene	1.3	0.048	0.9560	0	135	72.7	129	3.31	20	S
Xylenes, Total	3.8	0.096	2.868	0	134	75.7	126	2.76	20	S
Surr: 4-Bromofluorobenzene	1.0		0.9560		105	70	130	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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit



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: 2210837 RcptNo: 1

Received By: Juan Rojas 10/18/2022 7:30:00 AM

Completed By: Sean Livingston 10/18/2022 8:07:11 AM

Reviewed By: [Signature] 10/18/22

[Signatures]

Chain of Custody

- 1. Is Chain of Custody complete? Yes [checked] No [] Not Present []
2. How was the sample delivered? Courier

Log In

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

of preserved bottles checked for pH: (<2 or >12 unless noted) Adjusted? Checked by: [Signature] 10-18-22

Special Handling (if applicable)

- 15. Was client notified of all discrepancies with this order? Yes [] No [] NA [checked]

Person Notified: [] Date: []
By Whom: [] Via: [] eMail [] Phone [] Fax [] In Person []
Regarding: []
Client Instructions: []

16. Additional remarks:

17. Cooler Information

Table with 7 columns: Cooler No, Temp °C, Condition, Seal Intact, Seal No, Seal Date, Signed By. Row 1: 1, 1.0, Good, [], [], [], []

Chain-of-Custody Record

Client: Devon / Vertex

Mailing Address: 00 Fill

Phone #: _____

Email or Fax#: _____

QA/QC Package: Standard Level 4 (Full Validation)

Accreditation: Az Compliance Other

NELAC Other

EDD (Type) _____

Turn-Around Time: 2-Day

Standard Rush

Project Name: PAPAS FRIGAS 27 CTB 1

Project #: ZZE-01417

Project Manager: Kent Sealing's

Sampler: GD

On Ice: Yes No

of Coolers: _____

Cooler Temp (including CP): 0.9 to 1.2 (°C)

Container Type and # 40Z

Preservative Type ICC

HEAL No. 2210837

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	Temp (°C)
10/14/17	12:00	SOI	BE22-48 2.5'	40Z	ICC	2210837	001
	12:05		BE22-49 2.5'				002
	12:10		BE22-50 2.5'				003
	12:15		BE22-51 2.5'				004
	12:20		BE22-52 2.5'				005
	12:25		BE22-53 2.5'				006
	12:30		BE22-54 2.5'				007
	12:35		BE22-55 2.5'				008
	12:40		BE22-56 2.5'				009
	12:45		BE22-57 2.5'				010
	12:50		BE22-58 2.5'				011
	12:55		BE22-59 2.5'				012

Analysis Request

BTEX / MTBE / TMB's (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⁻, PO₄⁻, SO₄⁻

8260 (VOA)

8270 (Semi-VOA)

Total Coliform (Present/Absent)

Received by: alump Date: 10/17/22 11:15

Relinquished by: alump Date: 10/17/22 11:15

Received by: alump Date: 10/18/22 7:30

Relinquished by: alump Date: 10/18/22 7:30

Remarks: CC: Chance Dixon
DIRECT BILL DEVON

Chain-of-Custody Record

Client: DEVON VERTX
 Mailing Address: OR FILL
 Phone #: _____
 Email or Fax#: _____
 QA/QC Package:
 Standard Level 4 (Full Validation)
 Accreditation: AZ Compliance Other
 NELAC

Turn-Around Time: 2-DAY
 Standard Rush
 Project Name: PAPAS FRILAS 27 CTB1
 Project #: ZZE-01417
 Project Manager: KENT STAGNINGS
 Sampler: CD
 On Ice: Yes No
 # of Coolers: _____
 Cooler Temp (including CF): _____ (°C)



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

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
10/14/11	1:00	SOIL	BES22-60 2.5'	402	ICL	013
	1:05		BES22-61 2.5'			014
	1:10		BES22-62 2.5'			015
	1:15		BES22-63 2.5'			016
	1:20		BES22-64 2.5'			017
	1:25		BES22-66 2.5'			018
	1:30		BES22-67 2.5'			019
	1:35		BES22-68 2.5'			020
	1:40		BES22-69 2.5'			021
	9:00		BES22-70 2'			022
	9:05		BES22-71 2'			023
	9:10		BES22-72 2'			024

Analysis Request	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCBs	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)
BTEX / MTBE / TMB's (8021)	✓								

Relinquished by: [Signature] Date: 10/17/11 11:15
 Relinquished by: [Signature] Date: 10/17/11 1900
 Received by: [Signature] Date: 10/18/11 11:15
 Received by: [Signature] Date: 10/18/11 7:30

Remarks: CC: CHANCE DIXON
DIRECT BILL DEVON

Chain-of-Custody Record

Client: Devon Verkley
 Mailing Address: AD 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: PAPQS FRILAS 27 CTB1
 Project #: 22E-01417
 Project Manager: KENT STALLINGS
 Sampler: CD
 On Ice: Yes No
 # of Coolers: _____
 Cooler Temp (including CF): _____ (°C)

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
10/14	9:25	SOIL	BES22-73 2'	40Z	ICE	025
	9:30		BES22-74 2'			026
	9:35		BES22-75 2'			027
	9:40		BES22-76 2'			028
	9:45		BES22-77 2'			029
	9:50		BES22-78 2'			030
	9:55		BES22-79 2'			031
	10:00		BES22-80 2'			032
	10:05		BES22-81 2'			033
	10:10		BES22-82 2'			034
	10:15		BES22-83 2'			035
	10:20		BES22-84 2'			036

Analysis Request

BTEX / MTBE / TMB's (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 ⁻ , NO ₃ ⁻ , NO ₂ ⁻ , PO ₄ ⁻ , SO ₄ ⁻	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
----------------------------	----------------------------	---------------------------	--------------------	--------------------------	---------------	--	------------	-----------------	---------------------------------

Relinquished by: [Signature] Date: 10/17/22 Time: 1115
 Relinquished by: [Signature] Date: 10/18/22 Time: 7:30
 Received by: [Signature] Date: 10/17/22 Time: 1115
 Received by: [Signature] Date: 10/18/22 Time: 7:30
 Remarks: CC: Chance Dixon
Direct Bill Devon



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

October 28, 2022

Kent Stallings

Vertex Resources Services, Inc.
3101 Boyd Drive
Carlsbad, NM 88220
TEL: (505) 506-0040
FAX

RE: Papas Fritas 27 CTB1

OrderNo.: 2210A33

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 20 sample(s) on 10/20/2022 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 white background.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 2210A33

Date Reported: 10/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-41 2.5'

Project: Papas Fritas 27 CTB1

Collection Date: 10/18/2022 8:30:00 AM

Lab ID: 2210A33-001

Matrix: SOIL

Received Date: 10/20/2022 7:55:00 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	10/24/2022 2:40:08 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/24/2022 2:40:08 PM
Surr: DNOP	98.3	21-129		%Rec	1	10/24/2022 2:40:08 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/21/2022 12:48:41 PM
Surr: BFB	93.9	37.7-212		%Rec	1	10/21/2022 12:48:41 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	10/21/2022 12:48:41 PM
Toluene	ND	0.050		mg/Kg	1	10/21/2022 12:48:41 PM
Ethylbenzene	ND	0.050		mg/Kg	1	10/21/2022 12:48:41 PM
Xylenes, Total	ND	0.099		mg/Kg	1	10/21/2022 12:48:41 PM
Surr: 4-Bromofluorobenzene	95.5	70-130		%Rec	1	10/21/2022 12:48:41 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	10/23/2022 10:32:12 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	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2210A33**

Date Reported: **10/28/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-42 2.5'

Project: Papas Fritas 27 CTB1

Collection Date: 10/18/2022 8:35:00 AM

Lab ID: 2210A33-002

Matrix: SOIL

Received Date: 10/20/2022 7:55:00 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	10/24/2022 2:53:37 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/24/2022 2:53:37 PM
Surr: DNOP	101	21-129		%Rec	1	10/24/2022 2:53:37 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/21/2022 3:09:43 PM
Surr: BFB	94.1	37.7-212		%Rec	1	10/21/2022 3:09:43 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	10/21/2022 3:09:43 PM
Toluene	ND	0.047		mg/Kg	1	10/21/2022 3:09:43 PM
Ethylbenzene	ND	0.047		mg/Kg	1	10/21/2022 3:09:43 PM
Xylenes, Total	ND	0.095		mg/Kg	1	10/21/2022 3:09:43 PM
Surr: 4-Bromofluorobenzene	98.8	70-130		%Rec	1	10/21/2022 3:09:43 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	10/23/2022 10:44:37 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 Above Quantitation Range/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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2210A33**

Date Reported: **10/28/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-44 2.5'

Project: Papas Fritas 27 CTB1

Collection Date: 10/18/2022 8:40:00 AM

Lab ID: 2210A33-003

Matrix: SOIL

Received Date: 10/20/2022 7:55:00 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	10/24/2022 3:07:08 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/24/2022 3:07:08 PM
Surr: DNOP	102	21-129		%Rec	1	10/24/2022 3:07:08 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/21/2022 4:20:13 PM
Surr: BFB	91.3	37.7-212		%Rec	1	10/21/2022 4:20:13 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	10/21/2022 4:20:13 PM
Toluene	ND	0.047		mg/Kg	1	10/21/2022 4:20:13 PM
Ethylbenzene	ND	0.047		mg/Kg	1	10/21/2022 4:20:13 PM
Xylenes, Total	ND	0.095		mg/Kg	1	10/21/2022 4:20:13 PM
Surr: 4-Bromofluorobenzene	96.7	70-130		%Rec	1	10/21/2022 4:20:13 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	61		mg/Kg	20	10/23/2022 10:57:02 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 Above Quantitation Range/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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2210A33**

Date Reported: **10/28/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-08 1'

Project: Papas Fritas 27 CTB1

Collection Date: 10/18/2022 8:45:00 AM

Lab ID: 2210A33-004

Matrix: SOIL

Received Date: 10/20/2022 7:55:00 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	10/24/2022 3:20:49 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/24/2022 3:20:49 PM
Surr: DNOP	102	21-129		%Rec	1	10/24/2022 3:20:49 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/21/2022 4:43:41 PM
Surr: BFB	91.1	37.7-212		%Rec	1	10/21/2022 4:43:41 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	10/21/2022 4:43:41 PM
Toluene	ND	0.047		mg/Kg	1	10/21/2022 4:43:41 PM
Ethylbenzene	ND	0.047		mg/Kg	1	10/21/2022 4:43:41 PM
Xylenes, Total	ND	0.094		mg/Kg	1	10/21/2022 4:43:41 PM
Surr: 4-Bromofluorobenzene	96.2	70-130		%Rec	1	10/21/2022 4:43:41 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	10/23/2022 11:09:26 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 Above Quantitation Range/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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2210A33**

Date Reported: **10/28/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-28 2.5'

Project: Papas Fritas 27 CTB1

Collection Date: 10/18/2022 9:15:00 AM

Lab ID: 2210A33-005

Matrix: SOIL

Received Date: 10/20/2022 7:55:00 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	10/24/2022 12:09:17 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/24/2022 12:09:17 PM
Surr: DNOP	99.3	21-129		%Rec	1	10/24/2022 12:09:17 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	10/21/2022 5:07:03 PM
Surr: BFB	93.0	37.7-212		%Rec	1	10/21/2022 5:07:03 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	10/21/2022 5:07:03 PM
Toluene	ND	0.046		mg/Kg	1	10/21/2022 5:07:03 PM
Ethylbenzene	ND	0.046		mg/Kg	1	10/21/2022 5:07:03 PM
Xylenes, Total	ND	0.093		mg/Kg	1	10/21/2022 5:07:03 PM
Surr: 4-Bromofluorobenzene	98.3	70-130		%Rec	1	10/21/2022 5:07:03 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	10/23/2022 11:21:50 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 Above Quantitation Range/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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2210A33**

Date Reported: **10/28/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-29 2.5'

Project: Papas Fritas 27 CTB1

Collection Date: 10/18/2022 9:20:00 AM

Lab ID: 2210A33-006

Matrix: SOIL

Received Date: 10/20/2022 7:55:00 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	10/24/2022 12:33:36 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/24/2022 12:33:36 PM
Surr: DNOP	100	21-129		%Rec	1	10/24/2022 12:33:36 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	10/21/2022 5:30:34 PM
Surr: BFB	92.9	37.7-212		%Rec	1	10/21/2022 5:30:34 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	10/21/2022 5:30:34 PM
Toluene	ND	0.046		mg/Kg	1	10/21/2022 5:30:34 PM
Ethylbenzene	ND	0.046		mg/Kg	1	10/21/2022 5:30:34 PM
Xylenes, Total	ND	0.093		mg/Kg	1	10/21/2022 5:30:34 PM
Surr: 4-Bromofluorobenzene	98.3	70-130		%Rec	1	10/21/2022 5:30:34 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	220	60		mg/Kg	20	10/23/2022 12:24:01 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 Above Quantitation Range/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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2210A33**

Date Reported: **10/28/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-30 2.5'

Project: Papas Fritas 27 CTB1

Collection Date: 10/18/2022 9:25:00 AM

Lab ID: 2210A33-007

Matrix: SOIL

Received Date: 10/20/2022 7:55:00 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	10/24/2022 12:57:51 PM
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	10/24/2022 12:57:51 PM
Surr: DNOP	103	21-129		%Rec	1	10/24/2022 12:57:51 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/21/2022 5:54:01 PM
Surr: BFB	89.3	37.7-212		%Rec	1	10/21/2022 5:54:01 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	10/21/2022 5:54:01 PM
Toluene	ND	0.049		mg/Kg	1	10/21/2022 5:54:01 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/21/2022 5:54:01 PM
Xylenes, Total	ND	0.097		mg/Kg	1	10/21/2022 5:54:01 PM
Surr: 4-Bromofluorobenzene	94.6	70-130		%Rec	1	10/21/2022 5:54:01 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	1600	60		mg/Kg	20	10/23/2022 1:01:15 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 Above Quantitation Range/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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2210A33**

Date Reported: **10/28/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-31 2.5'

Project: Papas Fritas 27 CTB1

Collection Date: 10/18/2022 9:30:00 AM

Lab ID: 2210A33-008

Matrix: SOIL

Received Date: 10/20/2022 7:55:00 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	10/24/2022 1:22:10 PM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	10/24/2022 1:22:10 PM
Surr: DNOP	107	21-129		%Rec	1	10/24/2022 1:22:10 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/21/2022 6:17:32 PM
Surr: BFB	90.6	37.7-212		%Rec	1	10/21/2022 6:17:32 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	10/21/2022 6:17:32 PM
Toluene	ND	0.049		mg/Kg	1	10/21/2022 6:17:32 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/21/2022 6:17:32 PM
Xylenes, Total	ND	0.098		mg/Kg	1	10/21/2022 6:17:32 PM
Surr: 4-Bromofluorobenzene	95.2	70-130		%Rec	1	10/21/2022 6:17:32 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	850	60		mg/Kg	20	10/23/2022 1:38:29 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 Above Quantitation Range/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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2210A33**

Date Reported: **10/28/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-11 2'

Project: Papas Fritas 27 CTB1

Collection Date: 10/18/2022 9:35:00 AM

Lab ID: 2210A33-009

Matrix: SOIL

Received Date: 10/20/2022 7:55:00 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	10/24/2022 1:46:20 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/24/2022 1:46:20 PM
Surr: DNOP	91.1	21-129		%Rec	1	10/24/2022 1:46:20 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/21/2022 6:41:13 PM
Surr: BFB	87.8	37.7-212		%Rec	1	10/21/2022 6:41:13 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	10/21/2022 6:41:13 PM
Toluene	ND	0.049		mg/Kg	1	10/21/2022 6:41:13 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/21/2022 6:41:13 PM
Xylenes, Total	ND	0.097		mg/Kg	1	10/21/2022 6:41:13 PM
Surr: 4-Bromofluorobenzene	93.5	70-130		%Rec	1	10/21/2022 6:41:13 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	120	60		mg/Kg	20	10/23/2022 1:50:54 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 Above Quantitation Range/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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2210A33**

Date Reported: **10/28/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-15 1'

Project: Papas Fritas 27 CTB1

Collection Date: 10/18/2022 9:40:00 AM

Lab ID: 2210A33-010

Matrix: SOIL

Received Date: 10/20/2022 7:55:00 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	10/24/2022 2:10:37 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	10/24/2022 2:10:37 PM
Surr: DNOP	97.3	21-129		%Rec	1	10/24/2022 2:10:37 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/21/2022 7:04:41 PM
Surr: BFB	93.5	37.7-212		%Rec	1	10/21/2022 7:04:41 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	10/21/2022 7:04:41 PM
Toluene	ND	0.049		mg/Kg	1	10/21/2022 7:04:41 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/21/2022 7:04:41 PM
Xylenes, Total	ND	0.099		mg/Kg	1	10/21/2022 7:04:41 PM
Surr: 4-Bromofluorobenzene	98.9	70-130		%Rec	1	10/21/2022 7:04:41 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	66	60		mg/Kg	20	10/23/2022 2:28:08 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 Above Quantitation Range/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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2210A33**

Date Reported: **10/28/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-16 1'

Project: Papas Fritas 27 CTB1

Collection Date: 10/18/2022 9:45:00 AM

Lab ID: 2210A33-011

Matrix: SOIL

Received Date: 10/20/2022 7:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	10/24/2022 11:39:43 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/24/2022 11:39:43 AM
Surr: DNOP	94.4	21-129		%Rec	1	10/24/2022 11:39:43 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/21/2022 7:28:11 PM
Surr: BFB	91.6	37.7-212		%Rec	1	10/21/2022 7:28:11 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	10/21/2022 7:28:11 PM
Toluene	ND	0.048		mg/Kg	1	10/21/2022 7:28:11 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/21/2022 7:28:11 PM
Xylenes, Total	ND	0.097		mg/Kg	1	10/21/2022 7:28:11 PM
Surr: 4-Bromofluorobenzene	97.0	70-130		%Rec	1	10/21/2022 7:28:11 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	130	60		mg/Kg	20	10/23/2022 2:40:33 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 Above Quantitation Range/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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2210A33**

Date Reported: **10/28/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-10 1'

Project: Papas Fritas 27 CTB1

Collection Date: 10/18/2022 10:55:00 AM

Lab ID: 2210A33-012

Matrix: SOIL

Received Date: 10/20/2022 7:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	10/24/2022 12:03:20 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/24/2022 12:03:20 PM
Surr: DNOP	94.1	21-129		%Rec	1	10/24/2022 12:03:20 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/21/2022 8:38:42 PM
Surr: BFB	90.4	37.7-212		%Rec	1	10/21/2022 8:38:42 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	10/21/2022 8:38:42 PM
Toluene	ND	0.049		mg/Kg	1	10/21/2022 8:38:42 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/21/2022 8:38:42 PM
Xylenes, Total	ND	0.099		mg/Kg	1	10/21/2022 8:38:42 PM
Surr: 4-Bromofluorobenzene	95.5	70-130		%Rec	1	10/21/2022 8:38:42 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	760	60		mg/Kg	20	10/23/2022 2:52:57 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 Above Quantitation Range/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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2210A33**

Date Reported: **10/28/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-35 2.5'

Project: Papas Fritas 27 CTB1

Collection Date: 10/18/2022 11:00:00 AM

Lab ID: 2210A33-013

Matrix: SOIL

Received Date: 10/20/2022 7:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	10/24/2022 12:27:01 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/24/2022 12:27:01 PM
Surr: DNOP	92.8	21-129		%Rec	1	10/24/2022 12:27:01 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	10/21/2022 9:02:14 PM
Surr: BFB	90.2	37.7-212		%Rec	1	10/21/2022 9:02:14 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	10/21/2022 9:02:14 PM
Toluene	ND	0.046		mg/Kg	1	10/21/2022 9:02:14 PM
Ethylbenzene	ND	0.046		mg/Kg	1	10/21/2022 9:02:14 PM
Xylenes, Total	ND	0.092		mg/Kg	1	10/21/2022 9:02:14 PM
Surr: 4-Bromofluorobenzene	95.6	70-130		%Rec	1	10/21/2022 9:02:14 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	10/23/2022 3:05:22 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 Above Quantitation Range/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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2210A33**

Date Reported: **10/28/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-36 2.5'

Project: Papas Fritas 27 CTB1

Collection Date: 10/18/2022 11:05:00 AM

Lab ID: 2210A33-014

Matrix: SOIL

Received Date: 10/20/2022 7:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	10/24/2022 12:50:42 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	10/24/2022 12:50:42 PM
Surr: DNOP	95.5	21-129		%Rec	1	10/24/2022 12:50:42 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/21/2022 9:25:53 PM
Surr: BFB	89.9	37.7-212		%Rec	1	10/21/2022 9:25:53 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	10/21/2022 9:25:53 PM
Toluene	ND	0.049		mg/Kg	1	10/21/2022 9:25:53 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/21/2022 9:25:53 PM
Xylenes, Total	ND	0.098		mg/Kg	1	10/21/2022 9:25:53 PM
Surr: 4-Bromofluorobenzene	95.8	70-130		%Rec	1	10/21/2022 9:25:53 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	98	59		mg/Kg	20	10/23/2022 3:17:47 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 Above Quantitation Range/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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2210A33**

Date Reported: **10/28/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-37 2.5'

Project: Papas Fritas 27 CTB1

Collection Date: 10/18/2022 11:10:00 AM

Lab ID: 2210A33-015

Matrix: SOIL

Received Date: 10/20/2022 7:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	10/24/2022 1:14:26 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/24/2022 1:14:26 PM
Surr: DNOP	93.4	21-129		%Rec	1	10/24/2022 1:14:26 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/21/2022 9:49:32 PM
Surr: BFB	90.3	37.7-212		%Rec	1	10/21/2022 9:49:32 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	10/21/2022 9:49:32 PM
Toluene	ND	0.048		mg/Kg	1	10/21/2022 9:49:32 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/21/2022 9:49:32 PM
Xylenes, Total	ND	0.097		mg/Kg	1	10/21/2022 9:49:32 PM
Surr: 4-Bromofluorobenzene	95.2	70-130		%Rec	1	10/21/2022 9:49:32 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	390	60		mg/Kg	20	10/23/2022 3:30:12 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 Above Quantitation Range/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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2210A33**

Date Reported: **10/28/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: BES22-38 2.5'

Project: Papas Fritas 27 CTB1

Collection Date: 10/18/2022 11:35:00 AM

Lab ID: 2210A33-016

Matrix: SOIL

Received Date: 10/20/2022 7:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	10/24/2022 1:38:12 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/24/2022 1:38:12 PM
Surr: DNOP	94.0	21-129		%Rec	1	10/24/2022 1:38:12 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/21/2022 10:13:11 PM
Surr: BFB	92.5	37.7-212		%Rec	1	10/21/2022 10:13:11 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	10/21/2022 10:13:11 PM
Toluene	ND	0.048		mg/Kg	1	10/21/2022 10:13:11 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/21/2022 10:13:11 PM
Xylenes, Total	ND	0.096		mg/Kg	1	10/21/2022 10:13:11 PM
Surr: 4-Bromofluorobenzene	98.6	70-130		%Rec	1	10/21/2022 10:13:11 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	10/23/2022 3:42:37 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 Above Quantitation Range/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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2210A33**

Date Reported: **10/28/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-24 1'

Project: Papas Fritas 27 CTB1

Collection Date: 10/18/2022 1:00:00 PM

Lab ID: 2210A33-017

Matrix: SOIL

Received Date: 10/20/2022 7:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	10/24/2022 2:01:57 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/24/2022 2:01:57 PM
Surr: DNOP	95.4	21-129		%Rec	1	10/24/2022 2:01:57 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/21/2022 10:36:51 PM
Surr: BFB	90.3	37.7-212		%Rec	1	10/21/2022 10:36:51 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	10/21/2022 10:36:51 PM
Toluene	ND	0.047		mg/Kg	1	10/21/2022 10:36:51 PM
Ethylbenzene	ND	0.047		mg/Kg	1	10/21/2022 10:36:51 PM
Xylenes, Total	ND	0.093		mg/Kg	1	10/21/2022 10:36:51 PM
Surr: 4-Bromofluorobenzene	95.0	70-130		%Rec	1	10/21/2022 10:36:51 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	10/23/2022 3:55:01 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 Above Quantitation Range/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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2210A33**

Date Reported: **10/28/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-13 2'

Project: Papas Fritas 27 CTB1

Collection Date: 10/18/2022 1:15:00 PM

Lab ID: 2210A33-018

Matrix: SOIL

Received Date: 10/20/2022 7:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	10/24/2022 2:25:40 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	10/24/2022 2:25:40 PM
Surr: DNOP	93.5	21-129		%Rec	1	10/24/2022 2:25:40 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/21/2022 11:00:28 PM
Surr: BFB	92.7	37.7-212		%Rec	1	10/21/2022 11:00:28 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	10/21/2022 11:00:28 PM
Toluene	ND	0.047		mg/Kg	1	10/21/2022 11:00:28 PM
Ethylbenzene	ND	0.047		mg/Kg	1	10/21/2022 11:00:28 PM
Xylenes, Total	ND	0.094		mg/Kg	1	10/21/2022 11:00:28 PM
Surr: 4-Bromofluorobenzene	98.5	70-130		%Rec	1	10/21/2022 11:00:28 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	10/23/2022 4:07:26 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 Above Quantitation Range/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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2210A33**

Date Reported: **10/28/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-14 2'

Project: Papas Fritas 27 CTB1

Collection Date: 10/18/2022 1:20:00 PM

Lab ID: 2210A33-019

Matrix: SOIL

Received Date: 10/20/2022 7:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	10/24/2022 2:49:26 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/24/2022 2:49:26 PM
Surr: DNOP	93.4	21-129		%Rec	1	10/24/2022 2:49:26 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/21/2022 11:24:08 PM
Surr: BFB	90.8	37.7-212		%Rec	1	10/21/2022 11:24:08 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	10/21/2022 11:24:08 PM
Toluene	ND	0.049		mg/Kg	1	10/21/2022 11:24:08 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/21/2022 11:24:08 PM
Xylenes, Total	ND	0.097		mg/Kg	1	10/21/2022 11:24:08 PM
Surr: 4-Bromofluorobenzene	95.4	70-130		%Rec	1	10/21/2022 11:24:08 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	160	61		mg/Kg	20	10/23/2022 11:34:15 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 Above Quantitation Range/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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2210A33**

Date Reported: **10/28/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Vertex Resources Services, Inc.

Client Sample ID: WES22-18 1'

Project: Papas Fritas 27 CTB1

Collection Date: 10/18/2022 1:45:00 PM

Lab ID: 2210A33-020

Matrix: SOIL

Received Date: 10/20/2022 7:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	10/24/2022 3:13:14 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/24/2022 3:13:14 PM
Surr: DNOP	95.4	21-129		%Rec	1	10/24/2022 3:13:14 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/21/2022 11:47:47 PM
Surr: BFB	88.2	37.7-212		%Rec	1	10/21/2022 11:47:47 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	10/21/2022 11:47:47 PM
Toluene	ND	0.048		mg/Kg	1	10/21/2022 11:47:47 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/21/2022 11:47:47 PM
Xylenes, Total	ND	0.096		mg/Kg	1	10/21/2022 11:47:47 PM
Surr: 4-Bromofluorobenzene	93.6	70-130		%Rec	1	10/21/2022 11:47:47 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	180	60		mg/Kg	20	10/23/2022 4:44:41 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 Above Quantitation Range/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 standard limits. If undiluted results may be estimated.	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2210A33

28-Oct-22

Client: Vertex Resources Services, Inc.

Project: Papas Fritas 27 CTB1

Sample ID: MB-70995	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 70995	RunNo: 92015								
Prep Date: 10/21/2022	Analysis Date: 10/21/2022	SeqNo: 3301708	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-70995	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 70995	RunNo: 92015								
Prep Date: 10/21/2022	Analysis Date: 10/21/2022	SeqNo: 3301709	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			

Sample ID: MB-70996	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 70996	RunNo: 92023								
Prep Date: 10/21/2022	Analysis Date: 10/23/2022	SeqNo: 3301998	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-70996	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 70996	RunNo: 92023								
Prep Date: 10/21/2022	Analysis Date: 10/23/2022	SeqNo: 3301999	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			

Sample ID: MB-70995	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 70995	RunNo: 92023								
Prep Date: 10/21/2022	Analysis Date: 10/23/2022	SeqNo: 3302027	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-70995	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 70995	RunNo: 92023								
Prep Date: 10/21/2022	Analysis Date: 10/23/2022	SeqNo: 3302028	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.
- 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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/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#: 2210A33

28-Oct-22

Client: Vertex Resources Services, Inc.

Project: Papas Fritas 27 CTB1

Sample ID: LCS-70987	SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: LCSS	Batch ID: 70987		RunNo: 92025							
Prep Date: 10/21/2022	Analysis Date: 10/24/2022		SeqNo: 3302245		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	86.5	64.4	127			
Surr: DNOP	4.4		5.000		88.5	21	129			

Sample ID: MB-70987	SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: PBS	Batch ID: 70987		RunNo: 92025							
Prep Date: 10/21/2022	Analysis Date: 10/24/2022		SeqNo: 3302247		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	9.8		10.00		98.0	21	129			

Sample ID: 2210A33-001AMS	SampType: MS		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: BES22-41 2.5'	Batch ID: 70987		RunNo: 92025							
Prep Date: 10/21/2022	Analysis Date: 10/24/2022		SeqNo: 3302439		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	40	14	45.75	0	87.1	36.1	154			
Surr: DNOP	4.2		4.575		92.3	21	129			

Sample ID: 2210A33-001AMSD	SampType: MSD		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: BES22-41 2.5'	Batch ID: 70987		RunNo: 92025							
Prep Date: 10/21/2022	Analysis Date: 10/24/2022		SeqNo: 3302440		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	40	14	45.00	0	89.7	36.1	154	1.34	33.9	
Surr: DNOP	4.3		4.500		94.7	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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/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#: 2210A33

28-Oct-22

Client: Vertex Resources Services, Inc.

Project: Papas Fritas 27 CTB1

Sample ID: mb-70953	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 70953	RunNo: 92004								
Prep Date: 10/20/2022	Analysis Date: 10/21/2022	SeqNo: 3300850	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	960		1000		96.3	37.7	212			

Sample ID: ics-70953	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 70953	RunNo: 92004								
Prep Date: 10/20/2022	Analysis Date: 10/21/2022	SeqNo: 3300851	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	3200		1000		316	37.7	212			S

Sample ID: 2210a33-001ams	SampType: MS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: BES22-41 2.5'	Batch ID: 70953	RunNo: 92004								
Prep Date: 10/20/2022	Analysis Date: 10/21/2022	SeqNo: 3300853	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	29	5.0	24.80	0	115	70	130			
Surr: BFB	2000		992.1		205	37.7	212			

Sample ID: 2210a33-001amsd	SampType: MSD	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: BES22-41 2.5'	Batch ID: 70953	RunNo: 92004								
Prep Date: 10/20/2022	Analysis Date: 10/21/2022	SeqNo: 3300854	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	29	4.9	24.73	0	116	70	130	0.533	20	
Surr: BFB	2100		989.1		208	37.7	212	0	0	

Sample ID: mb-70932	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 70932	RunNo: 92004								
Prep Date: 10/19/2022	Analysis Date: 10/22/2022	SeqNo: 3300881	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	900		1000		89.6	37.7	212			

Sample ID: ics-70932	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 70932	RunNo: 92004								
Prep Date: 10/19/2022	Analysis Date: 10/22/2022	SeqNo: 3300882	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	2000		1000		196	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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/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#: 2210A33

28-Oct-22

Client: Vertex Resources Services, Inc.

Project: Papas Fritas 27 CTB1

Sample ID: mb-70953	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 70953	RunNo: 92004								
Prep Date: 10/20/2022	Analysis Date: 10/21/2022	SeqNo: 3300919	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		100	70	130			

Sample ID: LCS-70953	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 70953	RunNo: 92004								
Prep Date: 10/20/2022	Analysis Date: 10/21/2022	SeqNo: 3300920	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	99.7	80	120			
Toluene	1.0	0.050	1.000	0	101	80	120			
Ethylbenzene	1.0	0.050	1.000	0	100	80	120			
Xylenes, Total	3.0	0.10	3.000	0	101	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		100	70	130			

Sample ID: 2210a33-002ams	SampType: MS	TestCode: EPA Method 8021B: Volatiles								
Client ID: BES22-42 2.5'	Batch ID: 70953	RunNo: 92004								
Prep Date: 10/20/2022	Analysis Date: 10/21/2022	SeqNo: 3300923	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.024	0.9470	0.01307	101	68.8	120			
Toluene	1.0	0.047	0.9470	0.01354	104	73.6	124			
Ethylbenzene	1.0	0.047	0.9470	0	106	72.7	129			
Xylenes, Total	3.0	0.095	2.841	0.01932	106	75.7	126			
Surr: 4-Bromofluorobenzene	0.92		0.9470		96.9	70	130			

Sample ID: 2210a33-002amsd	SampType: MSD	TestCode: EPA Method 8021B: Volatiles								
Client ID: BES22-42 2.5'	Batch ID: 70953	RunNo: 92004								
Prep Date: 10/20/2022	Analysis Date: 10/21/2022	SeqNo: 3300924	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.024	0.9461	0.01307	99.0	68.8	120	2.16	20	
Toluene	0.97	0.047	0.9461	0.01354	102	73.6	124	2.92	20	
Ethylbenzene	0.99	0.047	0.9461	0	104	72.7	129	2.01	20	
Xylenes, Total	3.0	0.095	2.838	0.01932	104	75.7	126	1.31	20	
Surr: 4-Bromofluorobenzene	0.94		0.9461		99.1	70	130	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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/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#: 2210A33

28-Oct-22

Client: Vertex Resources Services, Inc.

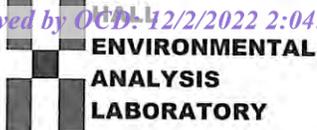
Project: Papas Fritas 27 CTB1

Sample ID: mb-70932	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 70932	RunNo: 92004								
Prep Date: 10/19/2022	Analysis Date: 10/22/2022	SeqNo: 3300943	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.96		1.000		95.5	70	130			

Sample ID: LCS-70932	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 70932	RunNo: 92004								
Prep Date: 10/19/2022	Analysis Date: 10/22/2022	SeqNo: 3300944	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.96		1.000		96.5	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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit



Sample Log-In Check List

Client Name: Vertex Resources Services, Inc.

Work Order Number: 2210A33

RcptNo: 1

Received By: Juan Rojas

10/20/2022 7:55:00 AM

Completed By: Tracy Casarrubias

10/20/2022 8:17:28 AM

Reviewed By: *SCC 10/20/22*

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° 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: *KPC 10.20.22*

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	2.4	Good	Yes			

Chain-of-Custody Record

Client: Devon/Vortex

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: Z-DAY

Standard Rush

Project Name: P4995 FR, FAS 27 CTB1

Project #: ZZE-01417

Project Manager: Kent Stainings

Sampler: CD

On Ice: Yes No

of Coolers: 1

Cooler Temp (including CF): 2.3 to 1.24 (°C)

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
10/18	8:30	SOIL	BES22-41 2.5'	4 OZ ICE		2210A33
	8:35		BES22-42 2.5'			001
	8:40		BES22-44 2.5'			002
	8:45		WES22-08 1'			003
	9:15		BES22-28 2.5'			004
	9:20		BES22-29 2.5'			005
	9:25		BES22-30 2.5'			006
	9:30		BES22-31 2.5'			007
	9:35		WES22-11 2'			008
	9:40		WES22-15 1'			009
	9:45		WES22-16 1'			010
	10:55		WES22-10 1'			012

Analysis Request

<input checked="" type="checkbox"/> BTEX / MTBE / TMB's (8021)	<input checked="" type="checkbox"/> TPH:8015D(GRO / DRO / MRO)	<input checked="" 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 type="checkbox"/> Cl ⁻ , F ⁻ , Br ⁻ , NO ₃ ⁻ , NO ₂ ⁻ , PO ₄ ³⁻ , SO ₄ ²⁻	<input type="checkbox"/> 8260 (VOA)	<input type="checkbox"/> 8270 (Semi-VOA)	<input type="checkbox"/> Total Coliform (Present/Absent)
--	--	--	---	---	--	---	-------------------------------------	--	--

Received by: ADMIN Date: 10/19/22 1230

Relinquished by: ADMIN Date: 10/20/22 7:55

Remarks: CC: CHARLE DIXON
DIRECT BILL DEVON
WIO# 20976 741

Chain-of-Custody Record

Client: Devon Vertex

Mailing Address: On File

Phone #: _____

email or Fax#: _____

QA/QC Package:
 Standard Level 4 (Full Validation)
 Az Compliance
 NELAC Other
 EDD (Type) _____

Turn-Around Time: 2-Day

Standard Rush

Project Name: PARAS FRITAS

Project #: 22E-01417

Project Manager: Kent Stagnings

Sampler: CD

On Ice: Yes No

of Coolers: _____

Cooler Temp (including CF): 23 to 27.9 (°C)

Container Type and #

Preservative Type

HEAL No.

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
10/18	11:00	SDI	BE22-35 2.5'	40Z	Ice	2210A33
	11:05		BE22-36 2.5'			013
	11:10		BE22-37 2.5'			014
	11:35		BE22-38 2.5'			015
	1:00		WE22-24 1'			016
	1:15		WE22-13 2'			017
	1:20		WE22-14 2'			018
	1:45		WE22-18 1'			014
						220

Analysis Request	
<input checked="" type="checkbox"/> BTEX / MTBE / TMB's (8021)	
<input checked="" type="checkbox"/> TPH:8015D(GRO / DRO / MRO)	
8081 Pesticides/8082 PCBs	
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)	



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 Dixon
W/O#: 20976741

Received by: Cummings Date: 10/18/22 Time: 1230

Received by: [Signature] Date: 10/20/22 Time: 7:50

Relinquished by: _____ Date: _____ Time: _____

Relinquished by: Cummings Date: 10/19/22 Time: 1900

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

October 31, 2022

Kent Stallings
Devon Energy
6488 Seven Rivers Highway
Artesia, NM 88210
TEL: (575) 748-0176
FAX:

RE: Papas fritas 27 CTB1

OrderNo.: 2210B03

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 33 sample(s) on 10/21/2022 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 white background.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order **2210B03**

Date Reported: **10/31/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-25 2.5'

Project: Papas fritas 27 CTB1

Collection Date: 10/19/2022 8:45:00 AM

Lab ID: 2210B03-001

Matrix: SOIL

Received Date: 10/21/2022 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	10/25/2022 9:47:11 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	10/25/2022 9:47:11 AM
Surr: DNOP	91.9	21-129		%Rec	1	10/25/2022 9:47:11 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/25/2022 2:27:27 AM
Surr: BFB	96.3	37.7-212		%Rec	1	10/25/2022 2:27:27 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	10/25/2022 2:27:27 AM
Toluene	ND	0.048		mg/Kg	1	10/25/2022 2:27:27 AM
Ethylbenzene	ND	0.048		mg/Kg	1	10/25/2022 2:27:27 AM
Xylenes, Total	ND	0.096		mg/Kg	1	10/25/2022 2:27:27 AM
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	10/25/2022 2:27:27 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	300	60		mg/Kg	20	10/24/2022 5:45:13 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 Above Quantitation Range/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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2210B03**

Date Reported: **10/31/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-26 2.5'

Project: Papas fritas 27 CTB1

Collection Date: 10/19/2022 8:45:00 AM

Lab ID: 2210B03-002

Matrix: SOIL

Received Date: 10/21/2022 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	10/25/2022 10:00:44 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/25/2022 10:00:44 AM
Surr: DNOP	85.3	21-129		%Rec	1	10/25/2022 10:00:44 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/25/2022 2:50:59 AM
Surr: BFB	98.2	37.7-212		%Rec	1	10/25/2022 2:50:59 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	10/25/2022 2:50:59 AM
Toluene	ND	0.050		mg/Kg	1	10/25/2022 2:50:59 AM
Ethylbenzene	ND	0.050		mg/Kg	1	10/25/2022 2:50:59 AM
Xylenes, Total	ND	0.10		mg/Kg	1	10/25/2022 2:50:59 AM
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	10/25/2022 2:50:59 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	97	60		mg/Kg	20	10/24/2022 5:57:38 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 Above Quantitation Range/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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2210B03**

Date Reported: **10/31/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-27 2.5'

Project: Papas fritas 27 CTB1

Collection Date: 10/19/2022 8:55:00 AM

Lab ID: 2210B03-003

Matrix: SOIL

Received Date: 10/21/2022 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	10/25/2022 10:14:26 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/25/2022 10:14:26 AM
Surr: DNOP	93.7	21-129		%Rec	1	10/25/2022 10:14:26 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/25/2022 3:14:27 AM
Surr: BFB	87.5	37.7-212		%Rec	1	10/25/2022 3:14:27 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	10/25/2022 3:14:27 AM
Toluene	ND	0.049		mg/Kg	1	10/25/2022 3:14:27 AM
Ethylbenzene	ND	0.049		mg/Kg	1	10/25/2022 3:14:27 AM
Xylenes, Total	ND	0.097		mg/Kg	1	10/25/2022 3:14:27 AM
Surr: 4-Bromofluorobenzene	93.4	70-130		%Rec	1	10/25/2022 3:14:27 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	790	60		mg/Kg	20	10/24/2022 7:24:30 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 Above Quantitation Range/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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2210B03**

Date Reported: **10/31/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: WES22-19 1'

Project: Papas fritas 27 CTB1

Collection Date: 10/19/2022 9:00:00 AM

Lab ID: 2210B03-004

Matrix: SOIL

Received Date: 10/21/2022 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	10/25/2022 10:27:57 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/25/2022 10:27:57 AM
Surr: DNOP	88.5	21-129		%Rec	1	10/25/2022 10:27:57 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/25/2022 3:37:53 AM
Surr: BFB	91.3	37.7-212		%Rec	1	10/25/2022 3:37:53 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	10/25/2022 3:37:53 AM
Toluene	ND	0.049		mg/Kg	1	10/25/2022 3:37:53 AM
Ethylbenzene	ND	0.049		mg/Kg	1	10/25/2022 3:37:53 AM
Xylenes, Total	ND	0.098		mg/Kg	1	10/25/2022 3:37:53 AM
Surr: 4-Bromofluorobenzene	97.4	70-130		%Rec	1	10/25/2022 3:37:53 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	89	60		mg/Kg	20	10/24/2022 7:36:54 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	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2210B03**

Date Reported: **10/31/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: WES22-22 1'

Project: Papas fritas 27 CTB1

Collection Date: 10/19/2022 9:05:00 AM

Lab ID: 2210B03-005

Matrix: SOIL

Received Date: 10/21/2022 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	10/25/2022 10:41:34 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/25/2022 10:41:34 AM
Surr: DNOP	90.3	21-129		%Rec	1	10/25/2022 10:41:34 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/25/2022 4:01:21 AM
Surr: BFB	98.4	37.7-212		%Rec	1	10/25/2022 4:01:21 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	10/25/2022 4:01:21 AM
Toluene	ND	0.050		mg/Kg	1	10/25/2022 4:01:21 AM
Ethylbenzene	ND	0.050		mg/Kg	1	10/25/2022 4:01:21 AM
Xylenes, Total	ND	0.10		mg/Kg	1	10/25/2022 4:01:21 AM
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	10/25/2022 4:01:21 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	140	60		mg/Kg	20	10/24/2022 7:49:18 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	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2210B03**

Date Reported: **10/31/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: WES22-23 1'

Project: Papas fritas 27 CTB1

Collection Date: 10/19/2022 9:10:00 AM

Lab ID: 2210B03-006

Matrix: SOIL

Received Date: 10/21/2022 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	10/25/2022 10:55:10 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/25/2022 10:55:10 AM
Surr: DNOP	91.6	21-129		%Rec	1	10/25/2022 10:55:10 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/25/2022 4:24:43 AM
Surr: BFB	96.2	37.7-212		%Rec	1	10/25/2022 4:24:43 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	10/25/2022 4:24:43 AM
Toluene	ND	0.049		mg/Kg	1	10/25/2022 4:24:43 AM
Ethylbenzene	ND	0.049		mg/Kg	1	10/25/2022 4:24:43 AM
Xylenes, Total	ND	0.098		mg/Kg	1	10/25/2022 4:24:43 AM
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	10/25/2022 4:24:43 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	97	60		mg/Kg	20	10/24/2022 8:01:42 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	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2210B03**

Date Reported: **10/31/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: WES22-25 1'

Project: Papas fritas 27 CTB1

Collection Date: 10/19/2022 9:15:00 AM

Lab ID: 2210B03-007

Matrix: SOIL

Received Date: 10/21/2022 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	10/25/2022 11:08:40 AM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/25/2022 11:08:40 AM
Surr: DNOP	76.8	21-129		%Rec	1	10/25/2022 11:08:40 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/25/2022 4:48:11 AM
Surr: BFB	96.5	37.7-212		%Rec	1	10/25/2022 4:48:11 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	10/25/2022 4:48:11 AM
Toluene	ND	0.050		mg/Kg	1	10/25/2022 4:48:11 AM
Ethylbenzene	ND	0.050		mg/Kg	1	10/25/2022 4:48:11 AM
Xylenes, Total	ND	0.099		mg/Kg	1	10/25/2022 4:48:11 AM
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	10/25/2022 4:48:11 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	110	60		mg/Kg	20	10/24/2022 8:14:06 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 Above Quantitation Range/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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2210B03**

Date Reported: **10/31/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: WES22-06 1'

Project: Papas fritas 27 CTB1

Collection Date: 10/19/2022 9:20:00 AM

Lab ID: 2210B03-008

Matrix: SOIL

Received Date: 10/21/2022 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	10/25/2022 11:22:15 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/25/2022 11:22:15 AM
Surr: DNOP	85.3	21-129		%Rec	1	10/25/2022 11:22:15 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/25/2022 5:11:40 AM
Surr: BFB	89.6	37.7-212		%Rec	1	10/25/2022 5:11:40 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	10/25/2022 5:11:40 AM
Toluene	ND	0.050		mg/Kg	1	10/25/2022 5:11:40 AM
Ethylbenzene	ND	0.050		mg/Kg	1	10/25/2022 5:11:40 AM
Xylenes, Total	ND	0.10		mg/Kg	1	10/25/2022 5:11:40 AM
Surr: 4-Bromofluorobenzene	96.1	70-130		%Rec	1	10/25/2022 5:11:40 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	110	60		mg/Kg	20	10/24/2022 8:26:31 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	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2210B03**

Date Reported: **10/31/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: WES22-07 1'

Project: Papas fritas 27 CTB1

Collection Date: 10/19/2022 9:25:00 AM

Lab ID: 2210B03-009

Matrix: SOIL

Received Date: 10/21/2022 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	10/25/2022 11:35:55 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/25/2022 11:35:55 AM
Surr: DNOP	78.8	21-129		%Rec	1	10/25/2022 11:35:55 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/24/2022 3:05:00 PM
Surr: BFB	107	37.7-212		%Rec	1	10/24/2022 3:05:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	10/24/2022 3:05:00 PM
Toluene	ND	0.048		mg/Kg	1	10/24/2022 3:05:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/24/2022 3:05:00 PM
Xylenes, Total	ND	0.095		mg/Kg	1	10/24/2022 3:05:00 PM
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	10/24/2022 3:05:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	10/24/2022 9:03:45 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	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2210B03

Date Reported: 10/31/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: WES22-03 1'

Project: Papas fritas 27 CTB1

Collection Date: 10/19/2022 9:55:00 AM

Lab ID: 2210B03-010

Matrix: SOIL

Received Date: 10/21/2022 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	10/25/2022 11:49:24 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/25/2022 11:49:24 AM
Surr: DNOP	76.9	21-129		%Rec	1	10/25/2022 11:49:24 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/24/2022 3:45:00 PM
Surr: BFB	104	37.7-212		%Rec	1	10/24/2022 3:45:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	10/24/2022 3:45:00 PM
Toluene	ND	0.049		mg/Kg	1	10/24/2022 3:45:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/24/2022 3:45:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	10/24/2022 3:45:00 PM
Surr: 4-Bromofluorobenzene	110	70-130		%Rec	1	10/24/2022 3:45:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	10/24/2022 9:16:10 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 Above Quantitation Range/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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2210B03**

Date Reported: **10/31/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: WES22-04 1'

Project: Papas fritas 27 CTB1

Collection Date: 10/19/2022 10:00:00 AM

Lab ID: 2210B03-011

Matrix: SOIL

Received Date: 10/21/2022 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	10/25/2022 3:15:29 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/25/2022 3:15:29 PM
Surr: DNOP	80.4	21-129		%Rec	1	10/25/2022 3:15:29 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/24/2022 4:05:00 PM
Surr: BFB	106	37.7-212		%Rec	1	10/24/2022 4:05:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.025		mg/Kg	1	10/24/2022 4:05:00 PM
Toluene	ND	0.050		mg/Kg	1	10/24/2022 4:05:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	10/24/2022 4:05:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	10/24/2022 4:05:00 PM
Surr: 4-Bromofluorobenzene	108	70-130		%Rec	1	10/24/2022 4:05:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	10/24/2022 9:28:34 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 Above Quantitation Range/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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2210B03**

Date Reported: **10/31/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: WES22-05 1'

Project: Papas fritas 27 CTB1

Collection Date: 10/19/2022 10:05:00 AM

Lab ID: 2210B03-012

Matrix: SOIL

Received Date: 10/21/2022 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	10/25/2022 12:16:29 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/25/2022 12:16:29 PM
Surr: DNOP	77.3	21-129		%Rec	1	10/25/2022 12:16:29 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/24/2022 4:25:00 PM
Surr: BFB	97.5	37.7-212		%Rec	1	10/24/2022 4:25:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.025		mg/Kg	1	10/24/2022 4:25:00 PM
Toluene	ND	0.050		mg/Kg	1	10/24/2022 4:25:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	10/24/2022 4:25:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	10/24/2022 4:25:00 PM
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	10/24/2022 4:25:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	10/24/2022 10:05:46 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 Above Quantitation Range/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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2210B03**

Date Reported: **10/31/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-13 2.5'

Project: Papas fritas 27 CTB1

Collection Date: 10/19/2022 10:30:00 AM

Lab ID: 2210B03-013

Matrix: SOIL

Received Date: 10/21/2022 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	10/25/2022 12:30:00 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/25/2022 12:30:00 PM
Surr: DNOP	82.9	21-129		%Rec	1	10/25/2022 12:30:00 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/24/2022 4:44:00 PM
Surr: BFB	99.0	37.7-212		%Rec	1	10/24/2022 4:44:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.025		mg/Kg	1	10/24/2022 4:44:00 PM
Toluene	ND	0.049		mg/Kg	1	10/24/2022 4:44:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/24/2022 4:44:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	10/24/2022 4:44:00 PM
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	10/24/2022 4:44:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	10/24/2022 10:18:10 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 Above Quantitation Range/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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2210B03**

Date Reported: **10/31/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-14 2.5'

Project: Papas fritas 27 CTB1

Collection Date: 10/19/2022 10:35:00 AM

Lab ID: 2210B03-014

Matrix: SOIL

Received Date: 10/21/2022 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	10/25/2022 12:43:38 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/25/2022 12:43:38 PM
Surr: DNOP	75.7	21-129		%Rec	1	10/25/2022 12:43:38 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/24/2022 5:04:00 PM
Surr: BFB	102	37.7-212		%Rec	1	10/24/2022 5:04:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	10/24/2022 5:04:00 PM
Toluene	ND	0.048		mg/Kg	1	10/24/2022 5:04:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/24/2022 5:04:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	10/24/2022 5:04:00 PM
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	10/24/2022 5:04:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	10/24/2022 10:30:35 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 Above Quantitation Range/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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2210B03**

Date Reported: **10/31/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-15 2.5'

Project: Papas fritas 27 CTB1

Collection Date: 10/19/2022 10:40:00 AM

Lab ID: 2210B03-015

Matrix: SOIL

Received Date: 10/21/2022 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	10/25/2022 12:57:28 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/25/2022 12:57:28 PM
Surr: DNOP	81.8	21-129		%Rec	1	10/25/2022 12:57:28 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/24/2022 5:24:00 PM
Surr: BFB	103	37.7-212		%Rec	1	10/24/2022 5:24:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	10/24/2022 5:24:00 PM
Toluene	ND	0.048		mg/Kg	1	10/24/2022 5:24:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/24/2022 5:24:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	10/24/2022 5:24:00 PM
Surr: 4-Bromofluorobenzene	108	70-130		%Rec	1	10/24/2022 5:24:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	10/24/2022 10:42:59 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 Above Quantitation Range/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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2210B03**

Date Reported: **10/31/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-17 2.5'

Project: Papas fritas 27 CTB1

Collection Date: 10/19/2022 10:45:00 AM

Lab ID: 2210B03-016

Matrix: SOIL

Received Date: 10/21/2022 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	10/25/2022 1:11:00 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	10/25/2022 1:11:00 PM
Surr: DNOP	73.8	21-129		%Rec	1	10/25/2022 1:11:00 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/24/2022 5:43:00 PM
Surr: BFB	109	37.7-212		%Rec	1	10/24/2022 5:43:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	10/24/2022 5:43:00 PM
Toluene	ND	0.048		mg/Kg	1	10/24/2022 5:43:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/24/2022 5:43:00 PM
Xylenes, Total	ND	0.096		mg/Kg	1	10/24/2022 5:43:00 PM
Surr: 4-Bromofluorobenzene	107	70-130		%Rec	1	10/24/2022 5:43:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	10/24/2022 10:55:23 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 Above Quantitation Range/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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2210B03**

Date Reported: **10/31/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-19 2.5'

Project: Papas fritas 27 CTB1

Collection Date: 10/19/2022 10:50:00 AM

Lab ID: 2210B03-017

Matrix: SOIL

Received Date: 10/21/2022 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	10/25/2022 1:24:37 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/25/2022 1:24:37 PM
Surr: DNOP	84.6	21-129		%Rec	1	10/25/2022 1:24:37 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/24/2022 6:03:00 PM
Surr: BFB	95.5	37.7-212		%Rec	1	10/24/2022 6:03:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	10/24/2022 6:03:00 PM
Toluene	ND	0.048		mg/Kg	1	10/24/2022 6:03:00 PM
Ethylbenzene	ND	0.048		mg/Kg	1	10/24/2022 6:03:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	10/24/2022 6:03:00 PM
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	10/24/2022 6:03:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	10/24/2022 11:32:37 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 Above Quantitation Range/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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2210B03**

Date Reported: **10/31/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: WES22-26 1'

Project: Papas fritas 27 CTB1

Collection Date: 10/19/2022 10:55:00 AM

Lab ID: 2210B03-018

Matrix: SOIL

Received Date: 10/21/2022 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	10/25/2022 1:38:28 PM
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	10/25/2022 1:38:28 PM
Surr: DNOP	86.3	21-129		%Rec	1	10/25/2022 1:38:28 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/24/2022 6:23:00 PM
Surr: BFB	103	37.7-212		%Rec	1	10/24/2022 6:23:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.025		mg/Kg	1	10/24/2022 6:23:00 PM
Toluene	ND	0.049		mg/Kg	1	10/24/2022 6:23:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/24/2022 6:23:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	10/24/2022 6:23:00 PM
Surr: 4-Bromofluorobenzene	110	70-130		%Rec	1	10/24/2022 6:23:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	10/24/2022 11:45:01 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 Above Quantitation Range/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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2210B03**

Date Reported: **10/31/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: WES22-28 1'

Project: Papas fritas 27 CTB1

Collection Date: 10/19/2022 11:00:00 AM

Lab ID: 2210B03-019

Matrix: SOIL

Received Date: 10/21/2022 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	10/25/2022 9:49:39 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/25/2022 9:49:39 AM
Surr: DNOP	85.0	21-129		%Rec	1	10/25/2022 9:49:39 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/24/2022 8:22:00 PM
Surr: BFB	99.9	37.7-212		%Rec	1	10/24/2022 8:22:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.025		mg/Kg	1	10/24/2022 8:22:00 PM
Toluene	ND	0.050		mg/Kg	1	10/24/2022 8:22:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	10/24/2022 8:22:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	10/24/2022 8:22:00 PM
Surr: 4-Bromofluorobenzene	109	70-130		%Rec	1	10/24/2022 8:22:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	59		mg/Kg	20	10/24/2022 11:57:25 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 Above Quantitation Range/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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2210B03**

Date Reported: **10/31/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: WES22-29 1'

Project: Papas fritas 27 CTB1

Collection Date: 10/19/2022 11:05:00 AM

Lab ID: 2210B03-020

Matrix: SOIL

Received Date: 10/21/2022 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	13		mg/Kg	1	10/25/2022 10:13:29 AM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	10/25/2022 10:13:29 AM
Surr: DNOP	92.8	21-129		%Rec	1	10/25/2022 10:13:29 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/24/2022 9:21:00 PM
Surr: BFB	98.1	37.7-212		%Rec	1	10/24/2022 9:21:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.025		mg/Kg	1	10/24/2022 9:21:00 PM
Toluene	ND	0.050		mg/Kg	1	10/24/2022 9:21:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	10/24/2022 9:21:00 PM
Xylenes, Total	ND	0.10		mg/Kg	1	10/24/2022 9:21:00 PM
Surr: 4-Bromofluorobenzene	108	70-130		%Rec	1	10/24/2022 9:21:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	10/25/2022 12:34:37 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 Above Quantitation Range/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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2210B03**

Date Reported: **10/31/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-23 2.5'

Project: Papas fritas 27 CTB1

Collection Date: 10/19/2022 12:30:00 PM

Lab ID: 2210B03-021

Matrix: SOIL

Received Date: 10/21/2022 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	10/25/2022 10:37:19 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/25/2022 10:37:19 AM
Surr: DNOP	90.0	21-129		%Rec	1	10/25/2022 10:37:19 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/24/2022 10:20:00 PM
Surr: BFB	101	37.7-212		%Rec	1	10/24/2022 10:20:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	10/24/2022 10:20:00 PM
Toluene	ND	0.049		mg/Kg	1	10/24/2022 10:20:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/24/2022 10:20:00 PM
Xylenes, Total	ND	0.097		mg/Kg	1	10/24/2022 10:20:00 PM
Surr: 4-Bromofluorobenzene	109	70-130		%Rec	1	10/24/2022 10:20:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	10/25/2022 1:11:50 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 Above Quantitation Range/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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2210B03**

Date Reported: **10/31/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: WES22-27 1'

Project: Papas fritas 27 CTB1

Collection Date: 10/19/2022 12:35:00 PM

Lab ID: 2210B03-022

Matrix: SOIL

Received Date: 10/21/2022 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	10/25/2022 11:01:08 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	10/25/2022 11:01:08 AM
Surr: DNOP	90.3	21-129		%Rec	1	10/25/2022 11:01:08 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/24/2022 10:40:00 PM
Surr: BFB	97.7	37.7-212		%Rec	1	10/24/2022 10:40:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.025		mg/Kg	1	10/24/2022 10:40:00 PM
Toluene	ND	0.050		mg/Kg	1	10/24/2022 10:40:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	10/24/2022 10:40:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	10/24/2022 10:40:00 PM
Surr: 4-Bromofluorobenzene	107	70-130		%Rec	1	10/24/2022 10:40:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	10/25/2022 1:24:14 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 Above Quantitation Range/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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2210B03**

Date Reported: **10/31/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-12 2.5'

Project: Papas fritas 27 CTB1

Collection Date: 10/19/2022 12:40:00 PM

Lab ID: 2210B03-023

Matrix: SOIL

Received Date: 10/21/2022 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: JME
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	10/25/2022 11:24:56 AM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	10/25/2022 11:24:56 AM
Surr: DNOP	90.9	21-129		%Rec	1	10/25/2022 11:24:56 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/24/2022 11:00:00 PM
Surr: BFB	101	37.7-212		%Rec	1	10/24/2022 11:00:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.025		mg/Kg	1	10/24/2022 11:00:00 PM
Toluene	ND	0.049		mg/Kg	1	10/24/2022 11:00:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/24/2022 11:00:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	10/24/2022 11:00:00 PM
Surr: 4-Bromofluorobenzene	108	70-130		%Rec	1	10/24/2022 11:00:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	61		mg/Kg	20	10/25/2022 2:01:27 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 Above Quantitation Range/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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2210B03**

Date Reported: **10/31/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-10 2.5'

Project: Papas fritas 27 CTB1

Collection Date: 10/19/2022 12:45:00 PM

Lab ID: 2210B03-024

Matrix: SOIL

Received Date: 10/21/2022 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	10/25/2022 1:43:00 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/25/2022 1:43:00 PM
Surr: DNOP	100	21-129		%Rec	1	10/25/2022 1:43:00 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/24/2022 11:20:00 PM
Surr: BFB	96.6	37.7-212		%Rec	1	10/24/2022 11:20:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.025		mg/Kg	1	10/24/2022 11:20:00 PM
Toluene	ND	0.049		mg/Kg	1	10/24/2022 11:20:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/24/2022 11:20:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	10/24/2022 11:20:00 PM
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	10/24/2022 11:20:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	10/25/2022 2:13:51 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 Above Quantitation Range/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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2210B03**

Date Reported: **10/31/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-09 2.5'

Project: Papas fritas 27 CTB1

Collection Date: 10/19/2022 12:50:00 PM

Lab ID: 2210B03-025

Matrix: SOIL

Received Date: 10/21/2022 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	10/25/2022 1:18:56 PM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/25/2022 1:18:56 PM
Surr: DNOP	98.9	21-129		%Rec	1	10/25/2022 1:18:56 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/24/2022 11:39:00 PM
Surr: BFB	98.0	37.7-212		%Rec	1	10/24/2022 11:39:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.025		mg/Kg	1	10/24/2022 11:39:00 PM
Toluene	ND	0.050		mg/Kg	1	10/24/2022 11:39:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	10/24/2022 11:39:00 PM
Xylenes, Total	ND	0.099		mg/Kg	1	10/24/2022 11:39:00 PM
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	10/24/2022 11:39:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	10/25/2022 2:26:15 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 Above Quantitation Range/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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2210B03**

Date Reported: **10/31/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-08 2.5'

Project: Papas fritas 27 CTB1

Collection Date: 10/19/2022 12:55:00 PM

Lab ID: 2210B03-026

Matrix: SOIL

Received Date: 10/21/2022 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	10/25/2022 12:54:43 PM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/25/2022 12:54:43 PM
Surr: DNOP	103	21-129		%Rec	1	10/25/2022 12:54:43 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/24/2022 11:59:00 PM
Surr: BFB	97.8	37.7-212		%Rec	1	10/24/2022 11:59:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	10/24/2022 11:59:00 PM
Toluene	ND	0.049		mg/Kg	1	10/24/2022 11:59:00 PM
Ethylbenzene	ND	0.049		mg/Kg	1	10/24/2022 11:59:00 PM
Xylenes, Total	ND	0.098		mg/Kg	1	10/24/2022 11:59:00 PM
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	10/24/2022 11:59:00 PM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	10/25/2022 2:38:39 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 Above Quantitation Range/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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2210B03**

Date Reported: **10/31/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-06 2.5'

Project: Papas fritas 27 CTB1

Collection Date: 10/19/2022 1:00:00 PM

Lab ID: 2210B03-027

Matrix: SOIL

Received Date: 10/21/2022 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	10/25/2022 12:30:35 PM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	10/25/2022 12:30:35 PM
Surr: DNOP	102	21-129		%Rec	1	10/25/2022 12:30:35 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/25/2022 12:19:00 AM
Surr: BFB	98.3	37.7-212		%Rec	1	10/25/2022 12:19:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.025		mg/Kg	1	10/25/2022 12:19:00 AM
Toluene	ND	0.049		mg/Kg	1	10/25/2022 12:19:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	10/25/2022 12:19:00 AM
Xylenes, Total	ND	0.099		mg/Kg	1	10/25/2022 12:19:00 AM
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	10/25/2022 12:19:00 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	10/25/2022 2:51:04 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 Above Quantitation Range/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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2210B03**

Date Reported: **10/31/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-05 2.5'

Project: Papas fritas 27 CTB1

Collection Date: 10/19/2022 1:05:00 PM

Lab ID: 2210B03-028

Matrix: SOIL

Received Date: 10/21/2022 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	10/25/2022 12:06:16 PM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	10/25/2022 12:06:16 PM
Surr: DNOP	94.7	21-129		%Rec	1	10/25/2022 12:06:16 PM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/25/2022 12:38:00 AM
Surr: BFB	101	37.7-212		%Rec	1	10/25/2022 12:38:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	10/25/2022 12:38:00 AM
Toluene	ND	0.049		mg/Kg	1	10/25/2022 12:38:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	10/25/2022 12:38:00 AM
Xylenes, Total	ND	0.098		mg/Kg	1	10/25/2022 12:38:00 AM
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	10/25/2022 12:38:00 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	10/25/2022 3:03:28 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 Above Quantitation Range/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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2210B03**

Date Reported: **10/31/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-04 2.5'

Project: Papas fritas 27 CTB1

Collection Date: 10/19/2022 1:10:00 PM

Lab ID: 2210B03-029

Matrix: SOIL

Received Date: 10/21/2022 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	10/25/2022 11:42:16 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/25/2022 11:42:16 AM
Surr: DNOP	97.2	21-129		%Rec	1	10/25/2022 11:42:16 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/25/2022 1:18:00 AM
Surr: BFB	102	37.7-212		%Rec	1	10/25/2022 1:18:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	10/25/2022 1:18:00 AM
Toluene	ND	0.048		mg/Kg	1	10/25/2022 1:18:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	10/25/2022 1:18:00 AM
Xylenes, Total	ND	0.096		mg/Kg	1	10/25/2022 1:18:00 AM
Surr: 4-Bromofluorobenzene	108	70-130		%Rec	1	10/25/2022 1:18:00 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	10/25/2022 3:15:52 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 Above Quantitation Range/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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order 2210B03

Date Reported: 10/31/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-02 2.5'

Project: Papas fritas 27 CTB1

Collection Date: 10/19/2022 1:15:00 PM

Lab ID: 2210B03-030

Matrix: SOIL

Received Date: 10/21/2022 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	10/25/2022 11:17:57 AM
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	10/25/2022 11:17:57 AM
Surr: DNOP	96.9	21-129		%Rec	1	10/25/2022 11:17:57 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/25/2022 1:38:00 AM
Surr: BFB	100	37.7-212		%Rec	1	10/25/2022 1:38:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	10/25/2022 1:38:00 AM
Toluene	ND	0.049		mg/Kg	1	10/25/2022 1:38:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	10/25/2022 1:38:00 AM
Xylenes, Total	ND	0.098		mg/Kg	1	10/25/2022 1:38:00 AM
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	10/25/2022 1:38:00 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	10/25/2022 3:28:17 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 Above Quantitation Range/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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2210B03**

Date Reported: **10/31/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: WES22-31 1'

Project: Papas fritas 27 CTB1

Collection Date: 10/19/2022 1:20:00 PM

Lab ID: 2210B03-031

Matrix: SOIL

Received Date: 10/21/2022 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	10/25/2022 10:53:49 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	10/25/2022 10:53:49 AM
Surr: DNOP	98.8	21-129		%Rec	1	10/25/2022 10:53:49 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/25/2022 1:57:00 AM
Surr: BFB	97.8	37.7-212		%Rec	1	10/25/2022 1:57:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	10/25/2022 1:57:00 AM
Toluene	ND	0.049		mg/Kg	1	10/25/2022 1:57:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	10/25/2022 1:57:00 AM
Xylenes, Total	ND	0.097		mg/Kg	1	10/25/2022 1:57:00 AM
Surr: 4-Bromofluorobenzene	106	70-130		%Rec	1	10/25/2022 1:57:00 AM
EPA METHOD 300.0: ANIONS						Analyst: JMT
Chloride	ND	60		mg/Kg	20	10/25/2022 3:40:41 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 Above Quantitation Range/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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2210B03**

Date Reported: **10/31/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: WES22-32 1'

Project: Papas fritas 27 CTB1

Collection Date: 10/19/2022 1:25:00 AM

Lab ID: 2210B03-032

Matrix: SOIL

Received Date: 10/21/2022 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	10/25/2022 10:29:41 AM
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	10/25/2022 10:29:41 AM
Surr: DNOP	99.5	21-129		%Rec	1	10/25/2022 10:29:41 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/25/2022 2:17:00 AM
Surr: BFB	100	37.7-212		%Rec	1	10/25/2022 2:17:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	10/25/2022 2:17:00 AM
Toluene	ND	0.049		mg/Kg	1	10/25/2022 2:17:00 AM
Ethylbenzene	ND	0.049		mg/Kg	1	10/25/2022 2:17:00 AM
Xylenes, Total	ND	0.098		mg/Kg	1	10/25/2022 2:17:00 AM
Surr: 4-Bromofluorobenzene	108	70-130		%Rec	1	10/25/2022 2:17:00 AM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	ND	61		mg/Kg	20	10/25/2022 12:26:48 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 Above Quantitation Range/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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2210B03**

Date Reported: **10/31/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: WES22-33 1'

Project: Papas fritas 27 CTB1

Collection Date: 10/19/2022 1:30:00 PM

Lab ID: 2210B03-033

Matrix: SOIL

Received Date: 10/21/2022 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	10/25/2022 10:05:33 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	10/25/2022 10:05:33 AM
Surr: DNOP	101	21-129		%Rec	1	10/25/2022 10:05:33 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: CCM
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/25/2022 2:37:00 AM
Surr: BFB	99.1	37.7-212		%Rec	1	10/25/2022 2:37:00 AM
EPA METHOD 8021B: VOLATILES						Analyst: CCM
Benzene	ND	0.024		mg/Kg	1	10/25/2022 2:37:00 AM
Toluene	ND	0.048		mg/Kg	1	10/25/2022 2:37:00 AM
Ethylbenzene	ND	0.048		mg/Kg	1	10/25/2022 2:37:00 AM
Xylenes, Total	ND	0.097		mg/Kg	1	10/25/2022 2:37:00 AM
Surr: 4-Bromofluorobenzene	107	70-130		%Rec	1	10/25/2022 2:37:00 AM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Chloride	160	60		mg/Kg	20	10/25/2022 12:39:08 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 Above Quantitation Range/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 standard limits. If undiluted results may be estimated.	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2210B03

31-Oct-22

Client: Devon Energy
Project: Papas fritas 27 CTB1

Sample ID: MB-71027	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 71027	RunNo: 92018								
Prep Date: 10/24/2022	Analysis Date: 10/24/2022	SeqNo: 3302974	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-71027	SampType: ics	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 71027	RunNo: 92018								
Prep Date: 10/24/2022	Analysis Date: 10/24/2022	SeqNo: 3302975	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	98.2	90	110			

Sample ID: MB-71031	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 71031	RunNo: 92018								
Prep Date: 10/24/2022	Analysis Date: 10/24/2022	SeqNo: 3303006	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-71031	SampType: ics	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 71031	RunNo: 92018								
Prep Date: 10/24/2022	Analysis Date: 10/24/2022	SeqNo: 3303007	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	98.0	90	110			

Sample ID: MB-71033	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 71033	RunNo: 92046								
Prep Date: 10/24/2022	Analysis Date: 10/24/2022	SeqNo: 3303106	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-71033	SampType: ics	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 71033	RunNo: 92046								
Prep Date: 10/24/2022	Analysis Date: 10/24/2022	SeqNo: 3303107	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	97.2	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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/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#: 2210B03

31-Oct-22

Client: Devon Energy
Project: Papas fritas 27 CTB1

Sample ID: MB-71043	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 71043	RunNo: 92056								
Prep Date: 10/24/2022	Analysis Date: 10/25/2022	SeqNo: 3303572	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	7.9		10.00		79.0	21	129			

Sample ID: LCS-71043	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 71043	RunNo: 92056								
Prep Date: 10/24/2022	Analysis Date: 10/25/2022	SeqNo: 3303573	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	15	50.00	0	95.5	64.4	127			
Surr: DNOP	3.5		5.000		70.8	21	129			

Sample ID: 2210B03-001AMS	SampType: MS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: BES22-25 2.5'	Batch ID: 71043	RunNo: 92056								
Prep Date: 10/24/2022	Analysis Date: 10/25/2022	SeqNo: 3303592	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	53	15	49.46	0	108	36.1	154			
Surr: DNOP	4.1		4.946		83.3	21	129			

Sample ID: 2210B03-001AMSD	SampType: MSD	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: BES22-25 2.5'	Batch ID: 71043	RunNo: 92056								
Prep Date: 10/24/2022	Analysis Date: 10/25/2022	SeqNo: 3303593	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	14	47.48	0	96.0	36.1	154	15.5	33.9	
Surr: DNOP	3.8		4.748		79.7	21	129	0	0	

Sample ID: 2210B03-019AMS	SampType: MS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: WES22-28 1'	Batch ID: 71021	RunNo: 92056								
Prep Date: 10/24/2022	Analysis Date: 10/25/2022	SeqNo: 3303594	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	15	49.07	0	102	36.1	154			
Surr: DNOP	4.0		4.907		81.2	21	129			

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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/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#: 2210B03

31-Oct-22

Client: Devon Energy
Project: Papas fritas 27 CTB1

Sample ID: 2210B03-019AMSD	SampType: MSD	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: WES22-28 1'	Batch ID: 71021	RunNo: 92056								
Prep Date: 10/24/2022	Analysis Date: 10/25/2022	SeqNo: 3303595			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	52	14	47.04	0	110	36.1	154	3.45	33.9	
Surr: DNOP	4.0		4.704		85.1	21	129	0	0	

Sample ID: MB-71021	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 71021	RunNo: 92056								
Prep Date: 10/24/2022	Analysis Date: 10/25/2022	SeqNo: 3307123			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	8.0		10.00		80.1	21	129			

Sample ID: LCS-71021	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 71021	RunNo: 92056								
Prep Date: 10/24/2022	Analysis Date: 10/25/2022	SeqNo: 3307124			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	52	15	50.00	0	104	64.4	127			
Surr: DNOP	3.9		5.000		78.1	21	129			

Sample ID: MB-71024	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 71024	RunNo: 92056								
Prep Date: 10/24/2022	Analysis Date: 10/25/2022	SeqNo: 3307125			Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.2		10.00		82.1	21	129			

Sample ID: LCS-71024	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 71024	RunNo: 92056								
Prep Date: 10/24/2022	Analysis Date: 10/25/2022	SeqNo: 3307126			Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	3.9		5.000		77.5	21	129			

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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/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#: 2210B03

31-Oct-22

Client: Devon Energy
Project: Papas fritas 27 CTB1

Sample ID: mb	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: G92027		RunNo: 92027							
Prep Date:	Analysis Date: 10/24/2022		SeqNo: 3302526		Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	950		1000		95.1	37.7	212			

Sample ID: 2.5ug gro lcs	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: G92027		RunNo: 92027							
Prep Date:	Analysis Date: 10/24/2022		SeqNo: 3302527		Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1900		1000		190	37.7	212			

Sample ID: mb-71004	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 71004		RunNo: 92027							
Prep Date: 10/23/2022	Analysis Date: 10/24/2022		SeqNo: 3302554		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	970		1000		97.4	37.7	212			

Sample ID: lcs-71004	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: 71004		RunNo: 92027							
Prep Date: 10/23/2022	Analysis Date: 10/24/2022		SeqNo: 3302555		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	5.0	25.00	0	111	72.3	137			
Surr: BFB	2100		1000		211	37.7	212			

Sample ID: mb-71005	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: 71005		RunNo: 92041							
Prep Date: 10/23/2022	Analysis Date: 10/24/2022		SeqNo: 3302845		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		98.8	37.7	212			

Sample ID: lcs-71005	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: 71005		RunNo: 92041							
Prep Date: 10/23/2022	Analysis Date: 10/24/2022		SeqNo: 3303528		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		223	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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/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#: 2210B03

31-Oct-22

Client: Devon Energy
Project: Papas fritas 27 CTB1

Sample ID: 2210B03-019ams	SampType: MS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: WES22-28 1'	Batch ID: 71005	RunNo: 92041								
Prep Date: 10/23/2022	Analysis Date: 10/24/2022	SeqNo: 3303535	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	4.8	24.13	0	101	70	130			
Surr: BFB	2200		965.3		230	37.7	212			S

Sample ID: 2210B03-019amsd	SampType: MSD	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: WES22-28 1'	Batch ID: 71005	RunNo: 92041								
Prep Date: 10/23/2022	Analysis Date: 10/24/2022	SeqNo: 3303536	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	4.8	23.88	0	95.2	70	130	6.61	20	
Surr: BFB	2100		955.1		215	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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/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#: 2210B03

31-Oct-22

Client: Devon Energy
Project: Papas fritas 27 CTB1

Sample ID: mb-71004	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 71004	RunNo: 92027								
Prep Date: 10/23/2022	Analysis Date: 10/24/2022	SeqNo: 3302600	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		104	70	130			

Sample ID: LCS-71004	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 71004	RunNo: 92027								
Prep Date: 10/23/2022	Analysis Date: 10/24/2022	SeqNo: 3302601	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	100	80	120			
Toluene	1.0	0.050	1.000	0	101	80	120			
Ethylbenzene	1.0	0.050	1.000	0	101	80	120			
Xylenes, Total	3.1	0.10	3.000	0	102	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		101	70	130			

Sample ID: Ics-71005	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 71005	RunNo: 92041								
Prep Date: 10/23/2022	Analysis Date: 10/24/2022	SeqNo: 3302911	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	1.000	0	105	80	120			
Toluene	1.1	0.050	1.000	0	106	80	120			
Ethylbenzene	1.1	0.050	1.000	0	106	80	120			
Xylenes, Total	3.2	0.10	3.000	0	106	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		108	70	130			

Sample ID: mb-71005	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 71005	RunNo: 92041								
Prep Date: 10/23/2022	Analysis Date: 10/24/2022	SeqNo: 3302912	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	1.1		1.000		107	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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/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#: 2210B03

31-Oct-22

Client: Devon Energy
Project: Papas fritas 27 CTB1

Sample ID: 2210B03-020ams	SampType: MS		TestCode: EPA Method 8021B: Volatiles							
Client ID: WES22-29 1'	Batch ID: 71005		RunNo: 92041							
Prep Date: 10/23/2022	Analysis Date: 10/24/2022		SeqNo: 3303537		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.024	0.9606	0	108	68.8	120			
Toluene	1.0	0.048	0.9606	0	108	73.6	124			
Ethylbenzene	1.0	0.048	0.9606	0	109	72.7	129			
Xylenes, Total	3.1	0.096	2.882	0	108	75.7	126			
Surr: 4-Bromofluorobenzene	1.1		0.9606		110	70	130			

Sample ID: 2210B03-020amsd	SampType: MSD		TestCode: EPA Method 8021B: Volatiles							
Client ID: WES22-29 1'	Batch ID: 71005		RunNo: 92041							
Prep Date: 10/23/2022	Analysis Date: 10/24/2022		SeqNo: 3303538		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.024	0.9785	0	106	68.8	120	0.0500	20	
Toluene	1.0	0.049	0.9785	0	107	73.6	124	0.909	20	
Ethylbenzene	1.0	0.049	0.9785	0	107	72.7	129	0.0712	20	
Xylenes, Total	3.1	0.098	2.935	0	106	75.7	126	0.0953	20	
Surr: 4-Bromofluorobenzene	1.1		0.9785		108	70	130	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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit



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: 2210B03

RcptNo: 1

Received By: Juan Rojas

10/21/2022 7:20:00 AM

Juan Rojas

Completed By: Tracy Casarrubias

10/21/2022 7:46:55 AM

Reviewed By: *See 10/21/22*

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° 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: *KPA 10.21.22*

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: _____

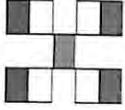
16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.4	Good	Yes			

Chain-of-Custody Record

Client: Devon/Vertex
 Mailing Address: 00 File
 Phone #: _____
 email or Fax#: _____
 QA/QC Package:
 Standard Level 4 (Full Validation)
 Accreditation: Az Compliance
 NELAC Other
 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	
<input checked="" type="checkbox"/> BTEX / MTBE / TMBs (8021)	TPH:8015D(GRO / DRO / MRO)
<input checked="" type="checkbox"/> 8081 Pesticides/8082 PCB's	EDB (Method 504.1)
<input type="checkbox"/> PAHs by 8310 or 8270SIMS	RCRA 8 Metals
<input checked="" type="checkbox"/> Cl ₂ , Br, NO ₃ , NO ₂ , PO ₄ , SO ₄	8260 (VOA)
<input checked="" type="checkbox"/> 8270 (Semi-VOA)	Total Coliform (Present/Absent)

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
10/19	8:25	SOIL	BES22-25 2.5'	40Z	ICE	2210B03
	8:50		BES22-26 2.5'			001
	8:55		BES22-27 2.5'			002
	9:00		WES22-19 1'			003
	9:05		WES22-22 1'			004
	9:10		WES22-23 1'			005
	9:15		WES22-25 1'			006
	9:20		WES22-06 1'			007
	9:25		WES22-07 1'			008
	9:55		WES22-03 1'			009
	10:00		WES22-04 1'			010
	10:05		WES22-05 1'			011
						012

Turn-Around Time: 2-1 day
 Standard Rush
 Project Name: PQAS FRIAS 27 CTB1
 Project #: ZZE-01417
 Project Manager: KENT STARRINGS
 Sampler: CD
 On Ice: Yes No
 # of Coolers: 1
 Cooler Temp (including CF): 0.2+0.2=0.4 (°C)
 Received by: Gummig Date: 10/20/22 Time: 1100
 Relinquished by: CSZ Date: 10/20/22 Time: 1900
 Received by: [Signature] Date: 10/21/22 Time: 7:20

Remarks: CC: Charles Dixon
Direct Bill Devon (20976741)

Chain-of-Custody Record

Client: Devon/Karet

Mailing Address: ON FILE

Phone #: _____
 email or Fax#: _____

QA/QC Package:
 Standard Level 4 (Full Validation)

Accreditation:
 AZ Compliance Other

NELAC Other

EDD (Type) _____

Turn-Around Time: Z-DAY
 Standard Rush

Project Name: Papas Fritas 27 CTB 1

Project #: ZZE-01417

Project Manager: Kent Stagnings

Sampler: CD
 On Ice: Yes No

of Coolers: _____
 Cooler Temp (including CFI): 0.7 to 2 = 0.4 (°C)

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
10/19	12:50	SOIL	BES22-09 2.5'	4 OZ	ICE	2210B03
	12:55		BES22-08 2.5'			025
	1:00		BES22-06 2.5'			026
	1:05		BES22-05 2.5'			027
	1:10		BES22-04 2.5'			028
	1:15		BES22-02 2.5'			029
	1:20		WES22-31 1'			030
	1:25		WES22-32 1'			031
	1:30		WES22-33 1'			032
						033

Received by: Summerville Date: 10/22 Time: 1100
 Received by: [Signature] Date: 12/2/22 Time: 7:20

Analysis Request	
BTEX) MTBE / TMB's (8021)	<input checked="" type="checkbox"/>
TPH:8015D(GRO / DRO / MRO)	<input checked="" type="checkbox"/>
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	<input checked="" type="checkbox"/>
8260 (VOA)	
8270 (Semi-VOA)	
Total Coliform (Present/Absent)	

Remarks: CC: Chance Dixon
Direct Bill Devon (20976741)



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

November 03, 2022

Kent Stallings
Devon Energy
6488 Seven Rivers Highway
Artesia, NM 88210
TEL: (575) 748-0176
FAX:

RE: Papas Fritas 27 CTB1

OrderNo.: 2210E68

Dear Kent Stallings:

Hall Environmental Analysis Laboratory received 6 sample(s) on 10/29/2022 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 white background.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order **2210E68**

Date Reported: **11/3/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: WES22-10 1'

Project: Papas Fritas 27 CTB1

Collection Date: 10/27/2022 9:30:00 AM

Lab ID: 2210E68-001

Matrix: MEOH (SOIL)

Received Date: 10/29/2022 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	11/1/2022 8:30:03 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	11/1/2022 8:30:03 AM
Surr: DNOP	98.1	21-129		%Rec	1	11/1/2022 8:30:03 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.3		mg/Kg	1	10/30/2022 1:29:59 AM
Surr: BFB	92.8	37.7-212		%Rec	1	10/30/2022 1:29:59 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.017		mg/Kg	1	10/30/2022 1:29:59 AM
Toluene	ND	0.033		mg/Kg	1	10/30/2022 1:29:59 AM
Ethylbenzene	ND	0.033		mg/Kg	1	10/30/2022 1:29:59 AM
Xylenes, Total	ND	0.067		mg/Kg	1	10/30/2022 1:29:59 AM
Surr: 4-Bromofluorobenzene	99.5	70-130		%Rec	1	10/30/2022 1:29:59 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	10/31/2022 1:54:14 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 Above Quantitation Range/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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2210E68**

Date Reported: **11/3/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-07 2.5'

Project: Papas Fritas 27 CTB1

Collection Date: 10/27/2022 9:45:00 AM

Lab ID: 2210E68-002

Matrix: MEOH (SOIL)

Received Date: 10/29/2022 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	11/1/2022 8:40:30 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	11/1/2022 8:40:30 AM
Surr: DNOP	97.4	21-129		%Rec	1	11/1/2022 8:40:30 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.3		mg/Kg	1	10/30/2022 1:53:29 AM
Surr: BFB	89.9	37.7-212		%Rec	1	10/30/2022 1:53:29 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.017		mg/Kg	1	10/30/2022 1:53:29 AM
Toluene	ND	0.033		mg/Kg	1	10/30/2022 1:53:29 AM
Ethylbenzene	ND	0.033		mg/Kg	1	10/30/2022 1:53:29 AM
Xylenes, Total	ND	0.066		mg/Kg	1	10/30/2022 1:53:29 AM
Surr: 4-Bromofluorobenzene	96.2	70-130		%Rec	1	10/30/2022 1:53:29 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	10/31/2022 2:31:28 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 Above Quantitation Range/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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2210E68**

Date Reported: **11/3/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-11 2.5'

Project: Papas Fritas 27 CTB1

Collection Date: 10/27/2022 9:50:00 AM

Lab ID: 2210E68-003

Matrix: MEOH (SOIL) **Received Date:** 10/29/2022 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	11/1/2022 3:13:21 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	11/1/2022 3:13:21 AM
Surr: DNOP	97.8	21-129		%Rec	1	11/1/2022 3:13:21 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.3		mg/Kg	1	10/30/2022 2:16:59 AM
Surr: BFB	87.4	37.7-212		%Rec	1	10/30/2022 2:16:59 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.016		mg/Kg	1	10/30/2022 2:16:59 AM
Toluene	ND	0.033		mg/Kg	1	10/30/2022 2:16:59 AM
Ethylbenzene	ND	0.033		mg/Kg	1	10/30/2022 2:16:59 AM
Xylenes, Total	ND	0.066		mg/Kg	1	10/30/2022 2:16:59 AM
Surr: 4-Bromofluorobenzene	94.3	70-130		%Rec	1	10/30/2022 2:16:59 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	10/31/2022 3:08:42 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 Above Quantitation Range/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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2210E68**

Date Reported: **11/3/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-27 3'

Project: Papas Fritas 27 CTB1

Collection Date: 10/27/2022 9:55:00 AM

Lab ID: 2210E68-004

Matrix: MEOH (SOIL)

Received Date: 10/29/2022 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	11/1/2022 3:23:50 AM
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	11/1/2022 3:23:50 AM
Surr: DNOP	97.6	21-129		%Rec	1	11/1/2022 3:23:50 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.5		mg/Kg	1	10/30/2022 4:37:53 AM
Surr: BFB	91.5	37.7-212		%Rec	1	10/30/2022 4:37:53 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.017		mg/Kg	1	10/30/2022 4:37:53 AM
Toluene	ND	0.035		mg/Kg	1	10/30/2022 4:37:53 AM
Ethylbenzene	ND	0.035		mg/Kg	1	10/30/2022 4:37:53 AM
Xylenes, Total	ND	0.070		mg/Kg	1	10/30/2022 4:37:53 AM
Surr: 4-Bromofluorobenzene	98.4	70-130		%Rec	1	10/30/2022 4:37:53 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	10/31/2022 3:21:06 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	Above Quantitation Range/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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order **2210E68**

Date Reported: **11/3/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-30 3'

Project: Papas Fritas 27 CTB1

Collection Date: 10/27/2022 10:00:00 AM

Lab ID: 2210E68-005

Matrix: MEOH (SOIL) **Received Date:** 10/29/2022 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	15		mg/Kg	1	11/1/2022 3:34:21 AM
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	11/1/2022 3:34:21 AM
Surr: DNOP	98.2	21-129		%Rec	1	11/1/2022 3:34:21 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.4		mg/Kg	1	10/30/2022 5:48:06 AM
Surr: BFB	91.8	37.7-212		%Rec	1	10/30/2022 5:48:06 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.017		mg/Kg	1	10/30/2022 5:48:06 AM
Toluene	ND	0.034		mg/Kg	1	10/30/2022 5:48:06 AM
Ethylbenzene	ND	0.034		mg/Kg	1	10/30/2022 5:48:06 AM
Xylenes, Total	ND	0.068		mg/Kg	1	10/30/2022 5:48:06 AM
Surr: 4-Bromofluorobenzene	97.6	70-130		%Rec	1	10/30/2022 5:48:06 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	60		mg/Kg	20	10/31/2022 3:33:31 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 Above Quantitation Range/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 standard limits. If undiluted results may be estimated.	

Analytical Report

Lab Order **2210E68**

Date Reported: **11/3/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Devon Energy

Client Sample ID: BES22-31 3'

Project: Papas Fritas 27 CTB1

Collection Date: 10/27/2022 10:05:00 AM

Lab ID: 2210E68-006

Matrix: MEOH (SOIL) **Received Date:** 10/29/2022 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	11/1/2022 3:44:52 AM
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	11/1/2022 3:44:52 AM
Surr: DNOP	91.7	21-129		%Rec	1	11/1/2022 3:44:52 AM
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.1		mg/Kg	1	10/30/2022 6:58:11 AM
Surr: BFB	93.4	37.7-212		%Rec	1	10/30/2022 6:58:11 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.015		mg/Kg	1	10/30/2022 6:58:11 AM
Toluene	ND	0.031		mg/Kg	1	10/30/2022 6:58:11 AM
Ethylbenzene	ND	0.031		mg/Kg	1	10/30/2022 6:58:11 AM
Xylenes, Total	ND	0.062		mg/Kg	1	10/30/2022 6:58:11 AM
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	10/30/2022 6:58:11 AM
EPA METHOD 300.0: ANIONS						Analyst: NAI
Chloride	ND	59		mg/Kg	20	10/31/2022 3:45:55 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 Above Quantitation Range/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 standard limits. If undiluted results may be estimated.	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2210E68

03-Nov-22

Client: Devon Energy
Project: Papas Fritas 27 CTB1

Sample ID: MB-71179	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 71179	RunNo: 92227								
Prep Date: 10/31/2022	Analysis Date: 10/31/2022	SeqNo: 3312348	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: LCS-71179	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 71179	RunNo: 92227								
Prep Date: 10/31/2022	Analysis Date: 10/31/2022	SeqNo: 3312349	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.7	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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/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#: 2210E68

03-Nov-22

Client: Devon Energy
Project: Papas Fritas 27 CTB1

Sample ID: LCS-71171	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 71171	RunNo: 92198								
Prep Date: 10/31/2022	Analysis Date: 10/31/2022	SeqNo: 3311075	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	15	50.00	0	92.2	64.4	127			
Surr: DNOP	4.4		5.000		88.2	21	129			

Sample ID: MB-71171	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 71171	RunNo: 92198								
Prep Date: 10/31/2022	Analysis Date: 10/31/2022	SeqNo: 3311076	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		90.3	21	129			

Sample ID: LCS-71174	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 71174	RunNo: 92198								
Prep Date: 10/31/2022	Analysis Date: 10/31/2022	SeqNo: 3312301	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.5		5.000		110	21	129			

Sample ID: MB-71174	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 71174	RunNo: 92198								
Prep Date: 10/31/2022	Analysis Date: 10/31/2022	SeqNo: 3312302	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.7		10.00		96.8	21	129			

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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/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#: 2210E68

03-Nov-22

Client: Devon Energy
Project: Papas Fritas 27 CTB1

Sample ID: mb	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: A92186		RunNo: 92186							
Prep Date:	Analysis Date: 10/29/2022		SeqNo: 3309758		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	940		1000		94.0	37.7	212			

Sample ID: 2.5ug gro lcs	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: A92186		RunNo: 92186							
Prep Date:	Analysis Date: 10/29/2022		SeqNo: 3309759		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	105	72.3	137			
Surr: BFB	2000		1000		203	37.7	212			

Sample ID: mb-II	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: B92186		RunNo: 92186							
Prep Date:	Analysis Date: 10/30/2022		SeqNo: 3309782		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	930		1000		92.6	37.7	212			

Sample ID: 2.5ug gro lcs-II	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: B92186		RunNo: 92186							
Prep Date:	Analysis Date: 10/30/2022		SeqNo: 3309783		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	99.4	72.3	137			
Surr: BFB	1900		1000		195	37.7	212			

Sample ID: 2210e68-004ams	SampType: MS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: BES22-27 3'	Batch ID: B92186		RunNo: 92186							
Prep Date:	Analysis Date: 10/30/2022		SeqNo: 3309791		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	17	3.5	17.39	0	96.1	70	130			
Surr: BFB	1300		695.4		191	37.7	212			

Sample ID: 2210e68-004amsd	SampType: MSD		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: BES22-27 3'	Batch ID: B92186		RunNo: 92186							
Prep Date:	Analysis Date: 10/30/2022		SeqNo: 3309792		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/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#: 2210E68

03-Nov-22

Client: Devon Energy
Project: Papas Fritas 27 CTB1

Sample ID: 2210e68-004amsd	SampType: MSD	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: BES22-27 3'	Batch ID: B92186	RunNo: 92186								
Prep Date:	Analysis Date: 10/30/2022	SeqNo: 3309792 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	16	3.5	17.39	0	90.6	70	130	5.83	20	
Surr: BFB	1300		695.4		182	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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/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#: 2210E68

03-Nov-22

Client: Devon Energy
Project: Papas Fritas 27 CTB1

Sample ID: mb	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: C92186		RunNo: 92186							
Prep Date:	Analysis Date: 10/29/2022		SeqNo: 3309797		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		98.7	70	130			

Sample ID: 100ng btex lcs	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: C92186		RunNo: 92186							
Prep Date:	Analysis Date: 10/29/2022		SeqNo: 3309798		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	1.000	0	105	80	120			
Toluene	1.1	0.050	1.000	0	105	80	120			
Ethylbenzene	1.0	0.050	1.000	0	104	80	120			
Xylenes, Total	3.1	0.10	3.000	0	105	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		102	70	130			

Sample ID: mb-II	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: D92186		RunNo: 92186							
Prep Date:	Analysis Date: 10/30/2022		SeqNo: 3309819		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		99.2	70	130			

Sample ID: 100ng btex lcs-II	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: D92186		RunNo: 92186							
Prep Date:	Analysis Date: 10/30/2022		SeqNo: 3309820		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	102	80	120			
Toluene	1.0	0.050	1.000	0	103	80	120			
Ethylbenzene	1.0	0.050	1.000	0	104	80	120			
Xylenes, Total	3.1	0.10	3.000	0	103	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		101	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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/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#: 2210E68

03-Nov-22

Client: Devon Energy
Project: Papas Fritas 27 CTB1

Sample ID: 2210e68-005ams	SampType: MS		TestCode: EPA Method 8021B: Volatiles							
Client ID: BES22-30 3'	Batch ID: D92186		RunNo: 92186							
Prep Date:	Analysis Date: 10/30/2022		SeqNo: 3309828		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.62	0.017	0.6752	0	92.6	68.8	120			
Toluene	0.64	0.034	0.6752	0	94.8	73.6	124			
Ethylbenzene	0.64	0.034	0.6752	0	94.8	72.7	129			
Xylenes, Total	1.9	0.068	2.026	0.01249	93.6	75.7	126			
Surr: 4-Bromofluorobenzene	0.62		0.6752		92.2	70	130			

Sample ID: 2210e68-005amsd	SampType: MSD		TestCode: EPA Method 8021B: Volatiles							
Client ID: BES22-30 3'	Batch ID: D92186		RunNo: 92186							
Prep Date:	Analysis Date: 10/30/2022		SeqNo: 3309829		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.67	0.017	0.6752	0	99.5	68.8	120	7.24	20	
Toluene	0.68	0.034	0.6752	0	101	73.6	124	6.18	20	
Ethylbenzene	0.68	0.034	0.6752	0	101	72.7	129	6.76	20	
Xylenes, Total	2.0	0.068	2.026	0.01249	99.8	75.7	126	6.42	20	
Surr: 4-Bromofluorobenzene	0.68		0.6752		100	70	130	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 standard limits. If undiluted results may be estimated.
- B Analyte detected in the associated Method Blank
- E Above Quantitation Range/Estimated Value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit



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: 2210E68 RcptNo: 1

Received By: Tracy Casarrubias 10/29/2022 8:45:00 AM

Completed By: Tracy Casarrubias 10/29/2022 9:23:52 AM

Reviewed By:

Chain of Custody

- 1. Is Chain of Custody complete? Yes [checked] No [] Not Present []
2. How was the sample delivered? Courier

Log In

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

of preserved bottles checked for pH: (<2 or >=12 unless noted)
Adjusted?
Checked by: TML 10/29/22

Special Handling (if applicable)

- 15. Was client notified of all discrepancies with this order? Yes [] No [] NA [checked]

Person Notified: Date:
By Whom: Via: [] eMail [] Phone [] Fax [] In Person
Regarding:
Client Instructions:

16. Additional remarks:

17. Cooler Information

Table with 7 columns: Cooler No, Temp °C, Condition, Seal Intact, Seal No, Seal Date, Signed By. Row 1: 1, 5.4, Good, Yes, , ,

Chain-of-Custody Record

Client: Devon/kurtz
 Mailing Address: 00 ELIE
 Phone #: _____
 email or Fax#: _____
 QA/QC Package: Standard Level 4 (Full Validation)
 Accreditation: Az Compliance NELAC Other
 EDD (Type) _____

Turn-Around Time: 24-HOUR
 Standard Rush
 Project Name: RARS FRIGS 27CTB 1
 Project #: 22E-01417

Project Manager: KATE SEGLINGS
 Sampler: CD
 On Ice: Yes No
 # of Coolers: 1
 Cooler Temp (including CP): 5.3 to 1.54 (°C)

Analysis Request
 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)

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
10/27	9:30	SOI	WES22-10 1'	40Z	ICE	2210E68
	9:45		BES22-07 2.5'			001
	9:50		BES22-11 2.5'			002
	9:55		BES22-27 3'			003
	10:00		BES22-30 3'			004
	10:05		BES22-31 3'			005
						006

Date	Time	Relinquished by:	Relinquished by:	Date	Time
10/28	0900	<u>CD</u>	<u>CD</u>	10/28	0900
10/28	0900	<u>CD</u>	<u>CD</u>	10/29/22	8:45

Received by: [Signature] Via: Sam Date: 10/29/22 Time: 8:45
 Remarks: CC: CHANCE DIXON
DIRECT BITH DEVON
20978741



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

ATTACHMENT 8



Dhugal Hanton <vertexresourcegroupusa@gmail.com>

Papa Fritas 27 CTB 1, 30 day extension

2 messages

Dhugal Hanton <vertexresourcegroupusa@gmail.com>

Fri, Oct 21, 2022 at 10:37 AM

To: "Enviro, OCD, EMNRD" <OCD.Enviro@state.nm.us>, "Bratcher, Mike, EMNRD" <Mike.Bratcher@state.nm.us>, "Billings, Bradford, EMNRD" <bradford.billings@state.nm.us>, "Nobui, Jennifer, EMNRD" <Jennifer.Nobui@state.nm.us>, "Hensley, Chad, EMNRD" <chad.hensley@state.nm.us>

Vertex is requesting a 30 day extension for **Papa Fritas 27 CTB 1**

nAPP2210924425, release date 4/18/2022

and

nAPP2127146416, release date 9/28/2021,

We are currently excavating and have collected confirmation samples. The excavation is almost complete and we are generating the report with the expectation that it will be ready within 30 days.

Please let me know if you have any questions or concerns.

Thank you,

Kent

Kent Stallings P.G.
Project Manager

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

P 575.725.5001
C 346.814.1413
F

www.vertex.ca

Confidentiality Notice: This message and any attachments are solely for the intended recipient and may contain confidential or privileged information. If you are not the intended recipient, any disclosure, copying, use, or distribution of the information included in this message and any attachment is prohibited. If you have received this communication in error, please notify us by reply email and immediately and permanently delete this message and any attachments. Thank you.

Hamlet, Robert, EMNRD <Robert.Hamlet@emnrd.nm.gov>
To: Dhugal Hanton <vertexresourcegroupusa@gmail.com>

Mon, Oct 24, 2022 at 1:40 PM

Kent,

Remediation plans were due for **incident NAPP2210924425 on 07/18/2022** and **incident NAPP2127146416 on 12/28/2021**. Due to the requests being outside the 90 day guideline, the extension requests are denied. Please include this e-mail correspondence in the remediation and/or closure report.

Robert Hamlet • Environmental Specialist - Advanced

Environmental Bureau

EMNRD - Oil Conservation Division

506 W. Texas Ave. | Artesia, NM 88210

575.909.0302 | robert.hamlet@state.nm.us

<http://www.emnrd.state.nm.us/OCD/>



From: Dhugal Hanton <vertexresourcegroupusa@gmail.com>
Sent: Friday, October 21, 2022 10:37 AM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>; Bratcher, Michael, EMNRD <mike.bratcher@emnrd.nm.gov>; Billings, Bradford, EMNRD <Bradford.Billings@emnrd.nm.gov>; Nobui, Jennifer, EMNRD <Jennifer.Nobui@emnrd.nm.gov>; Hensley, Chad, EMNRD <Chad.Hensley@emnrd.nm.gov>
Subject: [EXTERNAL] Papa Fritas 27 CTB 1, 30 day extension

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

[Quoted text hidden]

ATTACHMENT 9

DEVON ENERGY
Papas Fritas 27 CTB 1

Work Plan - Preliminary

UL O, Section 27, T23S, R29E
Eddy County, New Mexico

NAPP2127146416
NAPP2129171458

October 6, 2021



Prepared for:

Devon Energy
6488 Seven Rivers Hwy
Artesia, NM 88210

By:

Safety & Environmental Solutions, Inc.
703 East Clinton
Hobbs, New Mexico 88240
(575) 397-0510

Company Contacts

Representative	Company	Telephone	E-mail
Wes Mathews	Devon Energy	575-578-6195	Wesley.Mathews@dvn.com
Bob Allen	SESI	575-397-0510	ballen@sesi-nm.com

Background

Safety and Environmental Solutions, Inc., hereinafter referred to as (SESI) was contracted by Devon Energy to assess a release at the Papas Fritas 27 CTB 1 location. This site is situated in UL O, Section 27, Township 23S and Range 29E, in Lea County New Mexico. We are addressing the release in this plan which will be remediated upon plan approval.

According to the NOR for incident NAPP2113158013, corrosion on a fitting resulted in the release of 150 bbls of produced water. A vacuum truck was dispatched and recovered 125 bbls free-standing fluid.

This workplan addresses two incident numbers, NAPP2113158013 & NAPP2127146416. This single event was documented or reported twice, one is a duplicate.

Surface and Ground Water

According to the NMOCD Oil and Gas Map, there is no surface water within 3,000 feet of this location and spill areas. Depth to groundwater determination was not successfully established based on the guidelines required by NMOCD; therefore, Devon will remediate these spills according to the most stringent criteria set forth by NMOCD in NMAC 19.15.29.

Characterization

The release has been fully delineated both vertically and horizontally, which includes establishing horizontal and vertical extent of delineation to the most stringent standard of 600 mg/kg chlorides, 100 mg/kg TPH, 50 mg/kg BTEX, and 10 mg/kg Benzene.

Release Area (NAPP2113158013), Investigation

SESI personnel tracked and mapped the release and sampled the area to achieve both vertical and horizontal delineation. Samples were taken at the surface and 1-foot intervals until field testing indicated the samples to meet target levels. The horizontal extent samples are denoted on the map with an H beside the sample number. The samples were properly preserved and packaged and sent to Hall Environmental Labs for testing. The results of the analytical are captured in the summary table below.

Table 1 – Field Test Samples

Sample ID	Chloride	TPH		Sample ID	Chloride	TPH
AH-1 @ Surf	NT	NT		AH-9 @ Surf	NT	NT
AH-1 @ 1'	2220	NT		AH-9 @ 1'	<108	07
AH-1 @ 2'	160	01				
				AH-10 @ Surf	NT	NT

AH-2 @ Surf	NT	NT		AH-10 @ 1'	1532	NT
AH-2 @ 1'	2604	NT		AH-10 @ 2'	220	12
AH-2 @ 2'	1648	NT		AH-11 @ Surf	NT	NT
AH-2 @ 3'	160	05		AH-11 @ 1'	1648	NT
				AH-11 @ 2'	108	04
AH-3 @ Surf	NT	NT				
AH-3 @ 1'	160	03		AH-12 @ Surf	NT	NT
				AH-12 @ 1'	1532	NT
				AH-12 @ 2'	188	10
AH-4 @ Surf	NT	NT				
AH-4 @ 1'	1648	NT		AH-13 @ Surf	NT	NT
AH-4 @ 2'	188	05		AH-13 @ 1'	1772	NT
				AH-13 @ 2'	220	09
AH-5 @ Surf	NT	NT				
AH-5 @ 1'	1772	NT		AH-14 @ Surf	NT	NT
AH-5 @ 2'	188	02		AH-14 @ 1'	1648	NT
				AH-14 @ 2'	<108	10
AH-6 @ Surf	NT	NT				
AH-6 @ 1'	<108	01		AH-15 @ Surf	NT	NT
				AH-15 @ 1'	2604	NT
AH-7 @ Surf	NT	NT		AH-15 @ 2'	<108	03
AH-7 @ 1'	1772	NT				
AH-7 @ 2'	188	07				
AH-8 @ Surf	NT	NT				
AH-8 @ 1'	1648	NT				
AH-8 @ 2'	252	04				
Horizontal Samples						
Sample ID	Chloride	TPH		Sample ID	Chloride	TPH
H-N Surf 1	<108	NT		H-S Surf	252	NT
H-N Surf 2	<108	NT		H-E Surf 1	108	NT
H-W Surf 1	<108	NT		H-E Surf 2	252	NT
H-W Surf 2	220	NT				
H-W Surf 3	220	NT				
H-W Surf 4	252	NT				

Release Area (NAPP2113158013), Action Plan

Based on the results above for vertical extent samples AH-1 through AH-15, SESI respectfully recommends the entire leak of release area be remediated to a depth of 2 to 3 foot where applicable. The excavation area is outlined in the map of this release located in this report. Once this remediation plan is approved, Devon will perform the remediation and all removed soil will be disposed of in an OCD-approved landfill. Devon will then conduct both bottom and sidewall confirmation sampling to ensure all contaminated materials have been removed to the most stringent criteria established by NMOCD. Upon receipt of lab results verifying all contaminants have been removed, Devon will backfill the site with uncontaminated soil. If it becomes apparent that facility equipment and/or structure integrity is compromised, SESI respectfully requests deferment of those areas until a later date. If this happens, pictures of the area of equipment/structures will be provided to provide evidence of deferral necessity.

SESI, on behalf of Devon respectfully submits this remediation plan and requests approval at your earliest convenience. Upon approval, remediation efforts will be conducted within 90 days.

Supplemental and Supporting Documentation

Evidence Document 1: Map of Release area, with vertical and horizontal extent sample locations

Evidence Document 2: NMOCD Oil and Gas Topo map detailing area water features

Evidence Document 3: BLM Cave Karst map showing location in low potential area

Evidence Document 4: FEMA demonstrating minimal flood hazards for this area

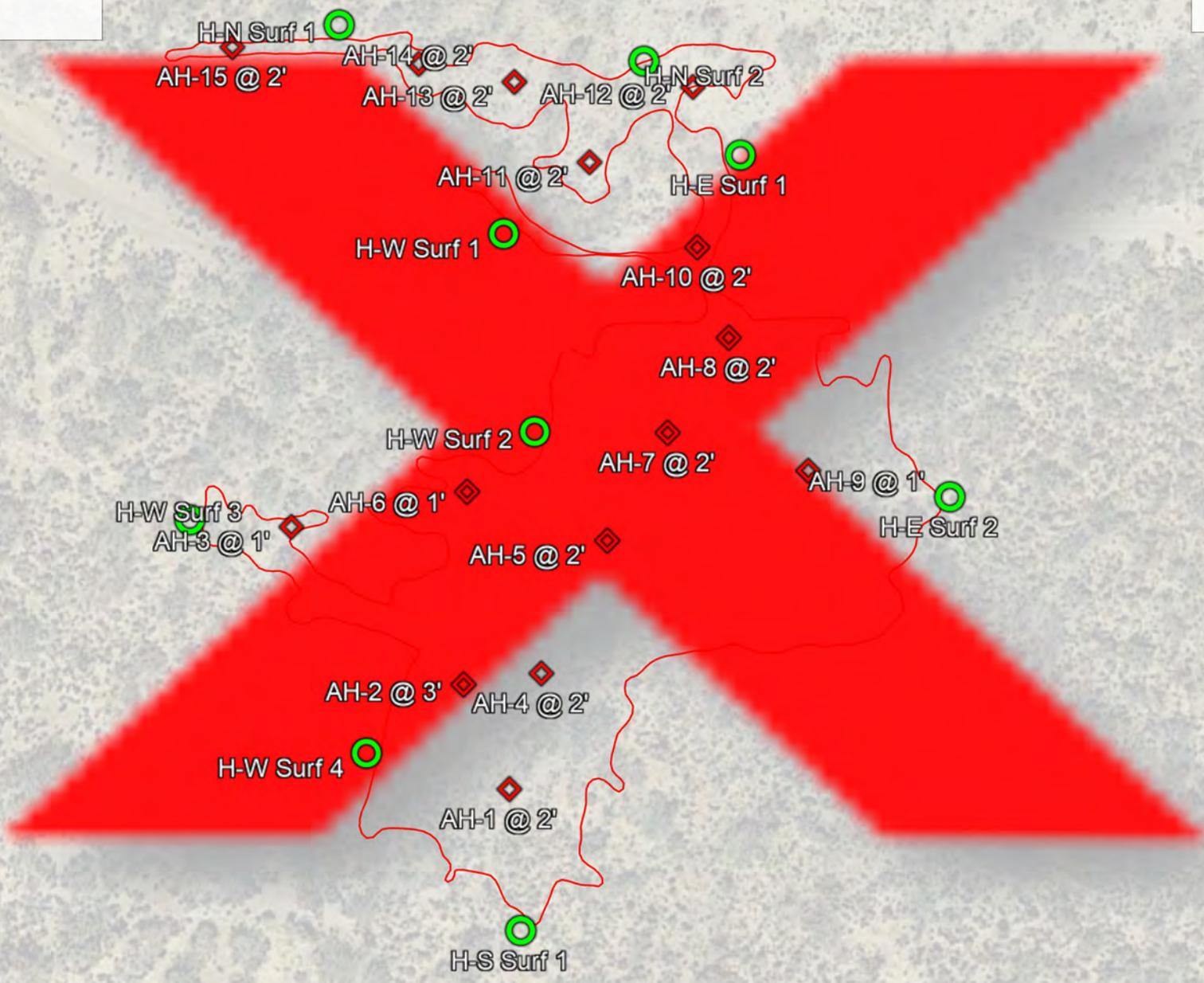
Evidence Document 5: Lab analysis for Release area, 6/16/21

Devon Energy

Papas Fritas CTB 1
27-23S-29E
Site Map w Samples
10.6.21

Legend

- ◆ @ 2'
- Feature 1
- Spill Area 1



Devon Energy

Papas Fritas CTB
27-23S-29E
10.6.21

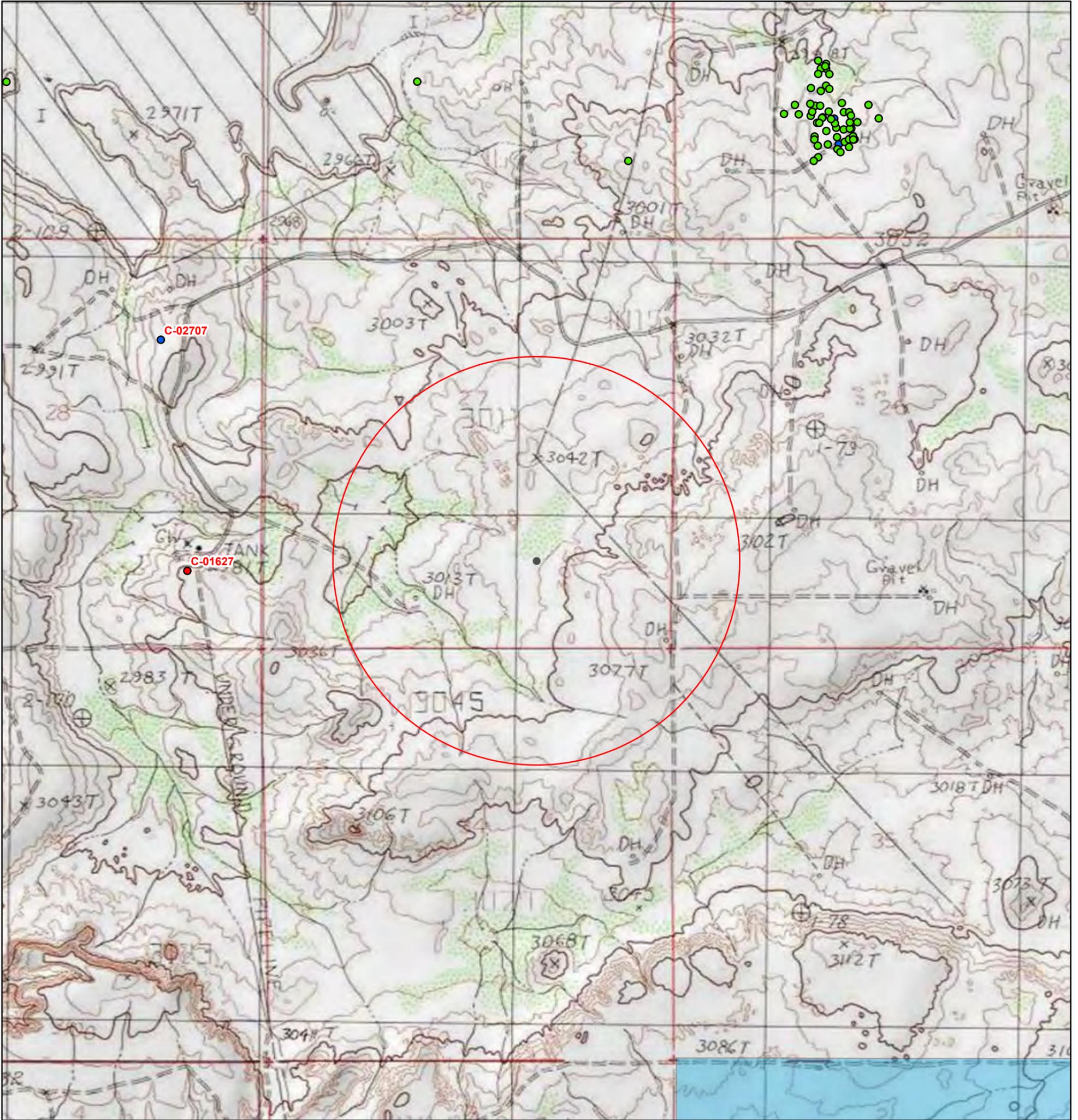
Legend

 Spill Area 1

S 29E



OSE PUBLIC PRINT



9/29/2021, 8:16:00 AM

1:18,056

GIS WATERS PODs

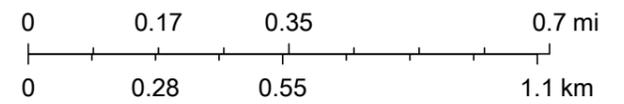
- Active
- Pending
- Plugged

OSE District Boundary

New Mexico State Trust Lands

Both Estates

SiteBoundaries



Copyright:© 2013 National Geographic Society, i-cubed, U.S. Department of Energy Office of Legacy Management



30-015-36137

30-015-21680

30-015-39220

30-015-39431

30-015-22157

30-015-39142

30-015-46577

30-015-46578

30-015-46575

30-015-47177

30-015-47859

30-015-46579

30-015-46578

30-015-47178

30-015-47179

30-015-47267

30-015-43076

30-015-42920

30-015-40768

30-015-47266

30-015-39219

30-015-39430

30-015-37308

30-015-35742

30-015-46823

30-015-46699

30-015-37308

30-015-35742

30-015-46824

30-015-46824

30-015-35693

30-015-37368

30-015-35413

Devon Energy

Papas Fritas CTB
J-27-23S-29E
Karst Map - Medium

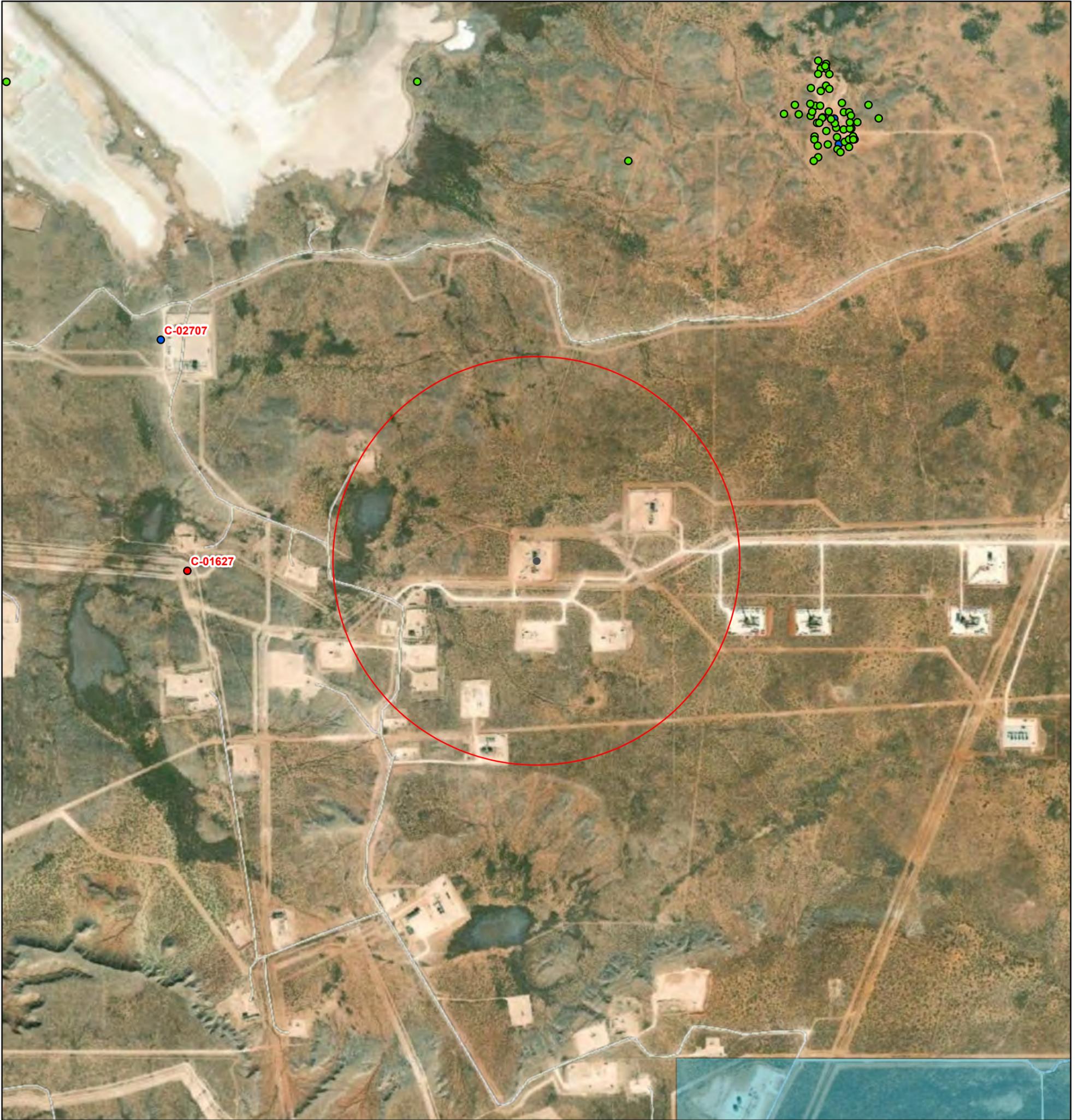
Legend

 Feature 1

32.27164100, -103.9697222
Papas Fritas CTB 



OSE PUBLIC PRINT



9/29/2021, 8:08:37 AM

GIS WATERS PODs

- Active
- Pending
- Plugged

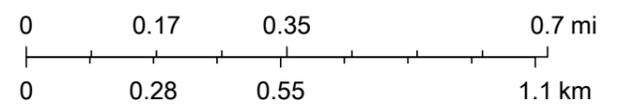
OSE District Boundary

New Mexico State Trust Lands

Both Estates

SiteBoundaries

1:18,056



Esri, HERE, iPC, U.S. Department of Energy Office of Legacy Management, Esri, HERE, Garmin, iPC, Maxar

National Water Information System: Web Interface

USGS Water Resources

Data Category: Geographic Area:

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](#) 

Click to hide state-specific text

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

Search Results -- No sites found

No sites were found for groundwater level data using your search criteria.

The sites you requested may be available offline. For more information, contact [USGS Water Data Inquiries](#).

Site name contains string = 23S.29E.27

Minimum number of levels = 1

Use the "Back" button on your browser to change your search criteria.

National Flood Hazard Layer FIRMette



103°58'32"W 32°16'35"N



Legend

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

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) <i>Zone A, V, A99</i>
		With BFE or Depth <i>Zone AE, AO, AH, VE, AR</i>
		Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile <i>Zone X</i>
		Future Conditions 1% Annual Chance Flood Hazard <i>Zone X</i>
		Area with Reduced Flood Risk due to Levee. See Notes. <i>Zone X</i>
		Area with Flood Risk due to Levee <i>Zone D</i>

OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard <i>Zone X</i>
		Effective LOMRs
		Area of Undetermined Flood Hazard <i>Zone D</i>
GENERAL STRUCTURES		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall

OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance
		17.5 Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
OTHER FEATURES		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 **10/7/2021 at 12:16 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.

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

COMMENTS

Action 163424

COMMENTS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 163424
	Action Type: [C-141] Release Corrective Action (C-141)

COMMENTS

Created By	Comment	Comment Date
jharimon	Incident file is missing the complete, signed and dated Initial C-141 form.	12/6/2022

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 163424

CONDITIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 163424
	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 #NAPP2210924425 PAPAS FRITAS 27 CTB 1, thank you. This closure is approved.	3/7/2023