

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: Spur Energy Partners	OGRID: 328947
Contact Name: Braidy Moulder	Contact Telephone: 281-795-2286
Contact email: bmoulder@spurepllc.com	Incident # (assigned by OCD)
Contact mailing address: 920 Memorial City Way, Suite 1400, Houston TX 77024	

Location of Release Source

Latitude 32.616751 Longitude -104.488446
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Holstun Water Line	Site Type: Water line
Date Release Discovered: May 8, 2020	API# 30-015-29899

Unit Letter	Section	Township	Range	County
J	33	19S	25E	Eddy

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 300	Volume Recovered (bbls) 280
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: We had a contractor company, excavating at the site of a previous spill. In the process they hit a 6" SWD water line causing a (est.) 300 bbl spill. Recovered (est.) 280 bbl. This leak did not get outside the area of the previous leak

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State of New Mexico
Oil Conservation Division

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Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? This release was over 25 bbls and is deemed major
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Kenny Kidd with Spur Energy Partners notified Jim Amos with the BLM and Mike Bratcher with EMNRD by email at 8:15pm on May 8, 2020	

Initial Response

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

☒ The source of the release has been stopped.	
☒ The impacted area has been secured to protect human health and the environment.	
☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.	
☒ All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <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: <u>Joseph Guesnier</u>	Title: <u>Staff Scientist</u>
Signature: <u></u>	Date: <u>5-14-20</u>
email: <u>JRGuesnier@Terracon.com</u>	Telephone: <u>806 544 9276</u>
<u>OCD Only</u>	
Received by: _____	Date: _____

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Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>250</u> (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ 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)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ 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?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☒ Yes ☐ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas not on an exploration, development, production, or storage site?	☐ Yes ☒ 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: <i>Each of the following items must be included in the report.</i>
☒ 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.

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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: Joseph Guenier Title: Staff Scientist
Signature: [Signature] Date: 4-2-21
email: JRGuenier@Terracon.com Telephone: 806-514-9276

OCD Only

Received by: _____ Date: _____

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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: Joseph Guenier Title: Staff Scientist
Signature: [Signature] Date: 4-2-21
email: JR.Guenier@TSTALOH.com Telephone: 806-544-9276

OCD Only

Received by: _____ Date: _____

- ☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: _____ Date: _____

Oil Conservation Division

Incident ID	
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: Joseph Guenier Title: Staff Scientist
 Signature: [Signature] Date: 4-2-21
 email: JGuenier@tercera.la Telephone: 806-544-9276

OCD Only

Received by: _____ Date: _____

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

Incident ID	NRM2013945547
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: Joselynn Guerin Title: Staff Scientist
 Signature: [Signature] Date: 4-2-21
 email: JGuerin@terracore.com Telephone: 806-544-9276

OCD Only

Received by: Robert Hamlet Date: 7/26/2021

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: 7/26/2021
 Printed Name: Robert Hamlet Title: Environmental Specialist - Advanced

Closure Report

General Site Information:

Holstun Water Line Release

NMOCD Reference No. (nRM2013950819 / nRM2013945547)

Site Contact:

Todd Mucha, Spur Energy Partners
920 Memorial City Way, Suite 1000, Houston, Texas 77024
(281) 795-2286

Depth to Ground Water

Greater than 100 feet below grade surface

Distance to Nearest Surface Water

Brantley Lake (North-central Eddy County, NM), approximately 5.95 miles to the Southeast

Driving Directions

From Hwy 285 head West on Rock Daisy Road for 4.7 miles. The site is on the Northside of the road.

Legal Description

Unit J, Section 33, T26S, R25E, Eddy County, New Mexico

April 20, 2021

Terracon Project No. AR207089

Prepared for:

Spur Energy Partners
Houston, Texas

Prepared by:

Terracon Consultants, Inc.
Lubbock, Texas

Offices Nationwide
Employee-Owned

Established in 1965
terracon.com

Terracon

Geotechnical ■ Environmental ■ Construction Materials ■ Facilities

April 20, 2021



Spur Energy Partners
920 Memorial City Way, Suite 1000
Houston, Texas 77024

Attn: Mr. Todd Mucha
P: 281-195-2286
E: todd@spurepllc.com

RE: **Closure Report**
Holstun Water Line Release
Unit J, Section 33, Township 26 South, Range 25 East
Eddy County, New Mexico
NMOCD Reference No. nRM2013950819 / nRM2013945547
Terracon Project No. AR207089

Dear Mr. Mucha,

Terracon Consultants, Inc. (Terracon) is pleased to submit our Closure of the Release for the site referenced above. The Release Investigation and closure report were developed in accordance with the New Mexico Oil Conservation Division (NMOCD) regulations concerning clean-up actions required for releases of crude oil and produced water. Based on the release investigation assessment, Terracon recommended the following actions be taken to achieve protection of fresh water and the environment in accordance with NMOCD regulations. Terracon developed the Release Investigation and closure report in general accordance with our proposal (PAR207084) dated June 1, 2020.

- Based on the magnitude of chloride and hydrocarbon concentrations detected within the release margins to depths subject to NMOCD Reclamation requirements, approximately 1,060 cubic yards (cy) of chloride impacted material was excavated and disposed of at a permitted disposal facility under manifest.
- Following excavation to restrictive layer depths, vertical and horizontal delineation samples were collected from the base and walls of the excavation to confirm the remaining levels of soil contaminants are below the desired NMOCD remediation action level (RAL).
- During initial excavation activities, restrictive features were encountered at 6 to 7 feet below grade surface (bgs). Terracon anticipated the need for hydro excavation services to complete the project; however, during excavation, it was determined that hydro excavation was not necessary.



Terracon Consultants, Inc. 5847 50th St. Lubbock, Texas 79424
P (806) 300 0140 F (806) 797 0947 terracon.com

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Closure Report

Holstun Water Line Release ■ Eddy County, New Mexico

April 20, 2021 ■ Terracon Project No. AR207089



- Based on the depth to groundwater and the confirmed vertical delineation, the remedial response was not warranted within the soils at depths greater than 8 ft. bgs.
- Terracon did backfill and will reseed following submittal of the closure report in accordance with *NMOCD Re-vegetation Guidelines (19.15.29.13)*.

Terracon appreciates this opportunity to provide environmental services to Spur Energy Partners LLC (Spur). Should you have any questions or require additional information, please do not hesitate to contact our office.

Sincerely,

Terracon Consultants, Inc.

Joseph Guesnier
Staff Scientist
Lubbock

Erin Loyd, P.G. (TX)
Principal
Office Manager – Lubbock



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APPENDIX A – FIGURES

- Figure 1 – Topographic Map
- Figure 2 – Site Diagram
- Figure 3 – Initial Contamination Concentration Map
- Figure 4 – Additional Contamination Concentration Map
- Figure 5 – Confirmation Concentration Map
- Figure 6 – NMOSE POD Location Map
- Figure 7 – Cave Karst Public UCP

APPENDIX B – TABLES & PROCEDURES

- Exhibit 1 – Soil Sampling Procedures
- Table 1 – Closure Criteria for Soils Impacted by a Release
- Table 2 – Soil Sample Analytical Results

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APPENDIX E – TERRACON STANDARD OF CARE, LIMITATION, AND RELIANCE

**Closure Report
Holstun Water Line Release
Unit J, Section 33, T26S, R25E
Eddy County, New Mexico
Terracon Project No. AR207089
April 20, 2021**

1.0 SITE DESCRIPTION

The site is comprised of the initial 0.1-acre reportable produced water spill and an additional 0.1-acre produced water spill, within the initial excavation that was dug to repair the cause of the initial release, the entirety of the spill residing on the pipeline right of way, and the remainder extending into the open excavation around the pipeline riser. The first release originated from a leak in the bottom of a 3" steel transition line, and the second release origin being a line strike on a 6" SWD water line within the base of the excavation.

The site is within the Unit Letter J, Section 33, Township 26 South, Range 25 East, Eddy County, New Mexico. The area of Holstun Water Line Release consists of rights-of-way for pipelines, and the Rock Daisy Road; the entire area is owned by a private landowner (Kevin Wellbanks). A Topographic Map illustrating the site location is included in Figure 1 and a Site Diagram illustrating soil sample locations is included as Figure 2 in Appendix A. A water well record search is also included as New Mexico Office of the State Engineer (NMOSE) Point of Diversion (POD) Location Map as Figure 6 in Appendix A. A map illustrating the site's location in reference to NMOCD Karst mapping database is presented in Figure 7 in Appendix A.

2.0 SCOPE OF SERVICES

Terracon's scope of services was to investigate the magnitude and extent of the documented releases and develop a closure report in accordance with the NMOCD requirements that detail site closure activities to be completed. This closure addresses the May 5, 2020, and May 8, 2020 releases totaling an estimated 323 barrels (bbls) of produced water, which contained an estimated 1 bbls of crude originating from a malfunctioning 3" steel line and a struck 6" polyline.

3.0 INTRODUCTION AND NOTIFICATION

The following table provides detailed information regarding the May 5, 2020, and May 8, 2020, produced water releases at the Holstun Water Line Release Site in Eddy County, New Mexico:

Closure Report

Holstun Water Line Release ■ Eddy County, New Mexico

April 20, 2021 ■ Terracon Project No. AR207089



Required Information	Site and Release information	
Responsible party	The facility is operated by Spur Energy Partners	
Local contact	Contact: Mr. Braidy Moulder	P: (281) 795-2286 E: bmoulder@spurepllc.com
NMOCD Notification	Notice of the initial minor release was provided by NMOCD email and a phone call by Kenny Kidd (Spur) on May 5, 2020. Notice of the 2 nd major release was provided to the NMOCD District 2 Artesia Office by Kenny Kidd (Spur) on May 8, 2020.	
Facility description	The Holstun Water Line Releases are in Eddy County, New Mexico. It is an approximate 0.25-acre area located within Unit J, Section 33, Township 26 South, Range 25 East, approximately 15 miles southwest of Artesia, New Mexico. The site is developed as an area for a pipeline riser and pipeline junction.	
Time of incidents	First: discovered May 5, 2020. Second: occurred May 8, 2020, at 8:15 p.m.	
Discharge events	The Releases of produced water containing crude oil originated from a leak on the bottom of a 3" steel transition and the striking of a 6" poly transfer line that was encountered when excavation of the initial release began. The release origins were on the north side of Rock Daisy Road. The release area, near the origin of the releases, was limited to an approximately 0.1-acre area; and, the release remained in this area and filled the initial excavation. The release area measures approximately 58 ft. by 86 ft. at the release point down to 7 ft bgs. The release margins are illustrated on Exhibit 2 of Appendix A	
Type of discharge	The documented fluids release occurred at the pipeline and affected the surface and appears to be surficial at depth.	
Quantity of spilled material	Total Fluids: 323 bbls	Produced Water: 323 bbls containing approximately 1 bbls of crude oil
Site characteristics	Relatively flat with drainage following the native ground surface; very gently sloping to the west.	
Immediate corrective actions	The pipeline was shut in, and pipelines that were malfunctioning or affected were replaced and repaired.	

Closure Report

Holstun Water Line Release ■ Eddy County, New Mexico

April 20, 2021 ■ Terracon Project No. AR207089

**4.0 INITIAL RESPONSE ACTIONS****4.1 Source Elimination**

Initial source elimination was accomplished by the Spur foreman shutting in the leaking line and contracting a third-party contractor to replace and repair the malfunctioning lines. Spur enlisted the help of Terracon to assess the impacted areas of the release.

5.0 GENERAL SITE CHARACTERISTICS

Remediation Determining Information	Site Ranking Characteristics
Groundwater	<u>POD Number:</u> RA 10826 <u>Depth to Groundwater:</u> 250 ft. bgs <u>Distance to Well:</u> 1.59 miles to the west <u>Date Drilled:</u> July 18, 2007 <u>Groundwater Quality:</u> The well referenced above, is utilized for livestock and domestic use.
Surface Water	Brantley Lake is located approximately 6 miles to the southeast.
Soil Characteristics	Soils at the site are mapped as Upton-Simona complex, 1 to 5 percent slopes, eroded, 0 to 13 inches gravelly loam, 13 to 21 inches cemented, and 21 to 60 inches very gravelly loam. This soil has a surface layer of gravelly sand. Restrictive features are present at 7 to 20 inches bgs resulting in the formation being categorized with a high runoff classification.
Karst Characterization	Terracon evaluated data from the NMOCD Public FTP Site, Karst map designations in reference to the site location. The site appears to be within a high-level Karst risk area. Based on on-site observations within the extent of the release margins, the potential for Karst formations in this specific area is of low potential. The site has a layer of solid competent rock from 60 to 72 inches bgs.
Depth of Remediation	The full extent of release quantities and excavation activities were not greater than 96 inches bgs.

Closure Report

Holstun Water Line Release ■ Eddy County, New Mexico

April 20, 2021 ■ Terracon Project No. AR207089



6.0 REGULATORY FRAMEWORK AND RESPONSE ACTION LEVELS

Oil and gas exploration and production facilities in New Mexico are generally regulated by the New Mexico Oil Conservation Division (NMOCD). The NMOCD has issued the *Closure Criteria for Soils Impacted by a Release, June 21, 2018*, and *Restoration, Reclamation, and Re-vegetation (19.15.29.13) NMAC – D (Reclamation of areas no longer in use)* as guidance documents for the remediation and reclamation of sites impacted by releases from oil and gas exploration and production activities. Sections 6.1 and 6.2 below detail the applicability of these guidance documents to the site-specific characteristics associated with the Eddy State #2 SWD.

6.1 Reclamation Levels (Surface to 4 ft. bgs)

The below Reclamation Limits for chlorides, TPH (GRO+DRO+MRO), BTEX (includes benzene, toluene, ethylbenzene, and xylenes), and benzene are defined within New Mexico Administration Code (NMAC) *Restoration, Reclamation, and Re-vegetation (19.15.29.13) New Mexico Administration Code (NMAC) – D (Reclamation of areas no longer in use)* for soils extending to 4 ft. bgs.:

Constituent	Remediation Limits
Chloride	600 mg/kg
TPH (GRO+DRO+MRO)	100 mg/kg
BTEX	50 mg/kg
Benzene	10 mg/kg

6.2 Remediation Levels (> 4 ft. bgs)

The *Closure Criteria for Soils Impacted by a Release* guidance document provides direction for initial response actions, site assessment, sampling procedures and provides closure criteria based on the depth to groundwater, distance to private and domestic water sources, and the distance to the nearest surface water body as follows:

Based on the site-specific characteristics, the applicable NMOCD remediation levels for Total BTEX, chloride, and TPH within soils, exclusive of the Reclamation Zone (4 ft. bgs to >4 ft. bgs), are as stated above.

Closure Report

Holstun Water Line Release ■ Eddy County, New Mexico

April 20, 2021 ■ Terracon Project No. AR207089

**7.0 SOIL SAMPLING PROCEDURES**

Soil sampling procedures are detailed as Exhibit 1 in Appendix B:

8.0 RELEASE INVESTIGATION DATA EVALUATION

During Terracon's May 5, 2020, and May 8, 2020 release investigation activities, a total of 17 soil samples were collected from the site off the pad and analyzed for BTEX, chloride, and/or TPH. Eleven of the samples were collected from within the release margins.

8.1 Release Margins Data Evaluation**8.1.1 Reclamation Assessment Data Evaluation**

Benzene was not detected above applicable laboratory SDLs in the seven soil samples analyzed within the release margins. The detected Benzene concentrations did not exceed the applicable NMOCD RAL for benzene of 10 mg/kg, as summarized in Table 1, Appendix A.

Total BTEX was detected above applicable laboratory SDLs in six of the seven soil samples analyzed within the release margins. The BTEX concentrations ranged from 0.0134 mg/kg in soil sample HA-2 (1.5 to 2.0 ft bgs) to 0.492 mg/kg in soil sample HA-1 (1.5 to 2.0 ft bgs). The detected Total BTEX concentrations did not exceed the applicable NMOCD RAL for Total BTEX of 50 mg/kg, as summarized in Table 1, Appendix A.

Chloride was detected above applicable laboratory SDLs in each of the seven soil samples analyzed within the release margins. The chloride concentrations ranged from 109 mg/kg in soil sample HA-3 (1.5 to 2.0 ft bgs) to 32,000 mg/kg in soil sample SW-(3.5-4) (3.5 to 4.0 ft bgs). The soil samples analyzed within the release margins did exhibit chloride concentrations exceeding the applicable NMOCD RAL for chloride of 600 mg/kg, as summarized in Table 1, Appendix A.

Total TPH was detected above applicable laboratory SDLs in four of the seven soil samples analyzed within the release margins. The Total TPH concentrations ranged from 26.6 mg/kg in soil sample SW-(3.5-4) (3.5 to 4.0 ft bgs) to 926 mg/kg in soil sample HA-1 (Surface to 0.5 ft bgs). The soil samples analyzed within the release margins did exhibit Total TPH concentrations above the NMOCD RAL of 100 mg/kg for Total TPH, as summarized in Table 1, Appendix A.

8.1.2 Remediation Assessment Data Evaluation

At each of the soil boring locations, soil samples greater than depths of 4 ft bgs were obtained due to not encountering a restrictive formation at depth. Resulting in four samples greater than 4 ft bgs., being analyzed.

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Benzene was detected above applicable laboratory SDLs in three of the four soil samples analyzed within the release margins. The Benzene concentrations ranged from 0.0932 mg/kg in soil sample HA-1 (5.5 to 6.0 ft bgs) to 0.575 mg/kg in soil sample HA-2 (4.5 to 5.0 ft bgs). The detected Benzene concentrations did not exceed the applicable NMOCD RAL for benzene of 10 mg/kg, as summarized in Table 1, Appendix A.

Total BTEX was detected above applicable laboratory SDLs in each of the four soil samples analyzed within the release margins. The BTEX concentrations ranged from 0.0116 mg/kg in soil sample HA-1 (4.5 to 5.0 ft bgs) to 4.17 mg/kg in soil sample HA-2 (4.5 to 5.0 ft bgs). The detected Total BTEX concentrations did not exceed the applicable NMOCD RAL for Total BTEX of 50 mg/kg, as summarized in Table 1, Appendix A.

Chloride was detected above applicable laboratory SDLs in each of the four soil samples analyzed within the release margins. The chloride concentrations ranged from 2,730 mg/kg in soil sample HA-1 (4.5 to 5.0 ft bgs) to 28,700 mg/kg in soil sample SW-(5.5-6) (5.5 to 6.0 ft bgs). The soil samples analyzed within the release margins did exhibit chloride concentrations exceeding the applicable NMOCD RAL for chloride of 600 mg/kg, as summarized in Table 1, Appendix A.

Total TPH was detected above applicable laboratory SDLs in each of the four soil samples analyzed within the release margins. The Total TPH concentrations ranged from 4.4 mg/kg in soil sample HA-1 (5.5 to 6.0 ft bgs) to 67.7 mg/kg in soil sample HA-1 (4.5 to 5.0 ft bgs). The soil samples analyzed within the release margins did not exhibit Total TPH concentrations above the NMOCD RAL of 100 mg/kg for Total TPH, as summarized in Table 1, Appendix A.

8.2 Release Investigation Data Summary

Based on the review of the above release investigation analytical results, the areas within the release margins did exhibit concentrations of chloride in multiple locations and Total TPH in a single location. Based on the concentrations being above the NMOCD RALs for off-pad reportable releases, Sections 9.0 and subsequent detail recommend remedial response actions not be implemented at the on-pad release site.

It is anticipated that released produced water-associated chlorides consolidated upon the cemented layer of the Petrocalcic features within the release margins. Based on the presence of the component rock, further analytical evaluation of deeper horizons appears unwarranted at this time.

8.3 Confirmation Margins Data Evaluation

During Terracon's two confirmation sampling events from August 23, 2020, to December 10, 2020, soil samples were collected from the sidewalls and the base of the open excavation in conjunction with reclamation activities. Confirmation composite samples were collected every 200

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linear feet along the perimeter of the sidewall, and floor confirmation samples were taken every 200 sq ft, resulting in 11 total soil samples collected from the site and analyzed for BTEX, chloride, and/or TPH.

8.3.1 Confirmation Assessment Data Evaluation

Benzene was detected above applicable laboratory SDLs in one of the 11 soil samples analyzed within the release margins. The Benzene concentration was 0.00209 mg/kg in soil sample SW.1 (3.5 to 4.0 ft bgs). The detected benzene concentrations did not exceed the applicable NMOCD RAL for benzene of 10 mg/kg, as summarized in Table 1, Appendix A.

Total BTEX was detected above applicable laboratory SDLs in three of the 11 soil samples analyzed within the release margins. The Total BTEX concentration ranged from 0.0807 mg/kg in soil sample NW.1 (3.5 to 4.0 ft bgs) to 0.146 mg/kg in soil sample SW.1 (3.5 to 4.0 ft bgs). The detected Total BTEX concentration did not exceed the applicable NMOCD RAL for Total BTEX of 50 mg/kg, as summarized in Table 1, Appendix A.

Chloride was detected above applicable laboratory SDLs in each of the 11 soil samples analyzed within the release margins. The chloride concentrations ranged from 192 mg/kg in soil sample EF (7.5 to 8.0 ft bgs) to 1,550 mg/kg in soil sample SW-(3.5-4) (3.5 to 4.0 ft bgs). The soil samples analyzed within the release margins from the first confirmation sampling events did exhibit chloride concentrations exceeding the applicable NMOCD RAL for chloride of 600 mg/kg. The final confirmation sampling event on December 10, 2020, did not exceed the applicable NMOCD RAL for chloride of 600 mg/kg as summarized in Table 1, Appendix A.

Total TPH was detected above applicable laboratory SDLs in one of the 11 soil samples analyzed within the release margins. The Total TPH concentrations were 82.5 mg/kg in soil sample WF (7.5 to 8.0 ft bgs). The detected Total TPH concentrations did not exceed the applicable NMOCD RAL of 100 mg/kg for Total TPH, as summarized in Table 1, Appendix A.

8.3.2 Confirmation Data Summary

Based on the review of analytical results, the presence of petroleum hydrocarbon constituents (BTEX/TPH) were not detected at concentrations above applicable NMOCD Reclamation and/or Remediation Action Limits.

Of the 11 soil samples analyzed, three soil samples exhibited chloride concentrations above the applicable NMOCD RAL of 600 mg/kg. Samples exhibiting concentrations above the NMOCD RAL were exclusive to the initial confirmation sampling event on August 23, 2020. Confirmation samples collected after remediation activities were below the NMOCD RALs.

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**9.0 SOIL RECLAMATION AND REMEDIATION**

Impacted soil will be remediated, reclaimed, and managed according to the criteria described below which is intended to protect freshwaters, public health, and the environment from exposure to the above constituents of concern.

9.1 Reclamation Response Objectives

Based on the magnitude of chloride concentrations detected within the release margins to depths subject to NMOCD Reclamation requirements, approximately 1,060 cy of chloride impacted material was required to be excavated and disposed of at a permitted disposal facility under manifest.

9.2 Remediation Response Objectives

Following excavation to recommended Remediation depths, horizontal and vertical delineation samples were collected from the base and walls of the excavation to confirm the remaining levels of soil contaminants are below the desired NMOCD RALs. Based on analyzed samples to the restrictive layer and the magnitude of the concentrations being below 600 mg/kg, Terracon sampled the base of the excavation that presented soils for sampling.

Based on the depth to groundwater and presences of a high Karst potential area, the remedial response was not warranted within the soils at depths greater than 8 ft. bgs.

9.3 Soil Management

The selected method of soil management is removal and disposal at an NMOCD-approved facility. Excavated soils will be transported by truck (20 cubic yard capacity) and disposed of at either the R360 Disposal Facility located in Halfway, New Mexico, or the Lea Land Disposal Facility located in Lea County, New Mexico, based on landfill approvals.

10.0 TERMINATION OF REMEDIAL ACTIONS, FINAL CLOSURE AND REPORTING**10.1 Termination of Reclamation and Remedial Actions**

Reclamation and remedial actions at the site were terminated when the confirmation samples indicated that the above objectives had been completed within the reclamation and remedial depth designations. The reclamation and remedial approaches are intended to achieve compliance with NMOCD regulatory objectives in ensuring that any remaining contaminants will

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not pose a threat to present or foreseeable beneficial use of freshwater, public health, and the environment.

10.2 Final Closure

Upon termination of remedial actions (Sections 6 and 9), the area of the release will be closed by backfilling the excavated area, contouring to surrounding area topography, and reseeded the area with approved-native vegetative seed.

10.3 Final Report

Upon completion of remedial activities, a final report summarizing actions taken to mitigate environmental damage related to the release has been provided to NMOCD for approval.

APPENDIX A – FIGURES AND TABLES

Figure 1 – Topographic Map

Figure 2 – Site Diagram

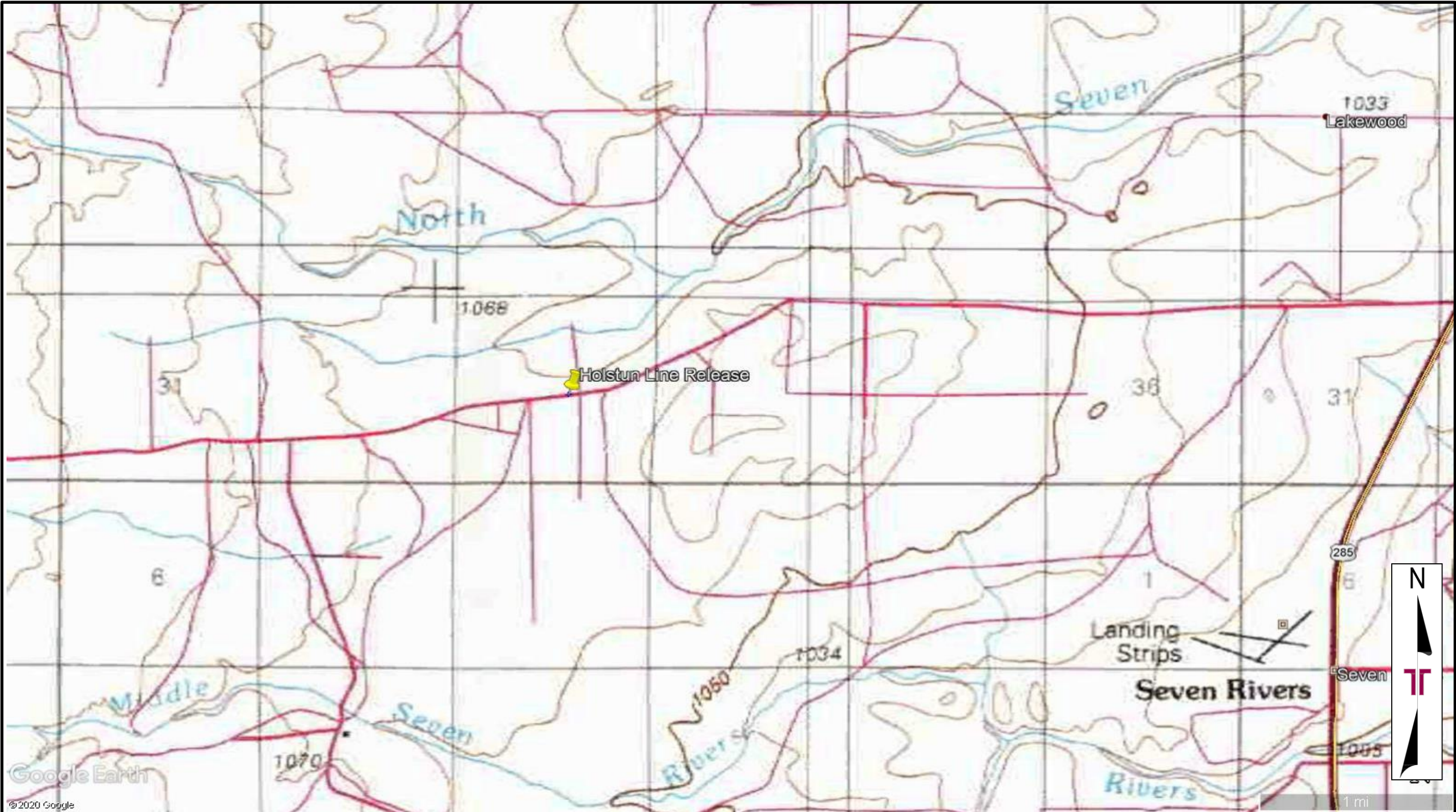
Figure 3 – Initial Contamination Concentration Map

Figure 4 – Additional Contamination Concentration Map

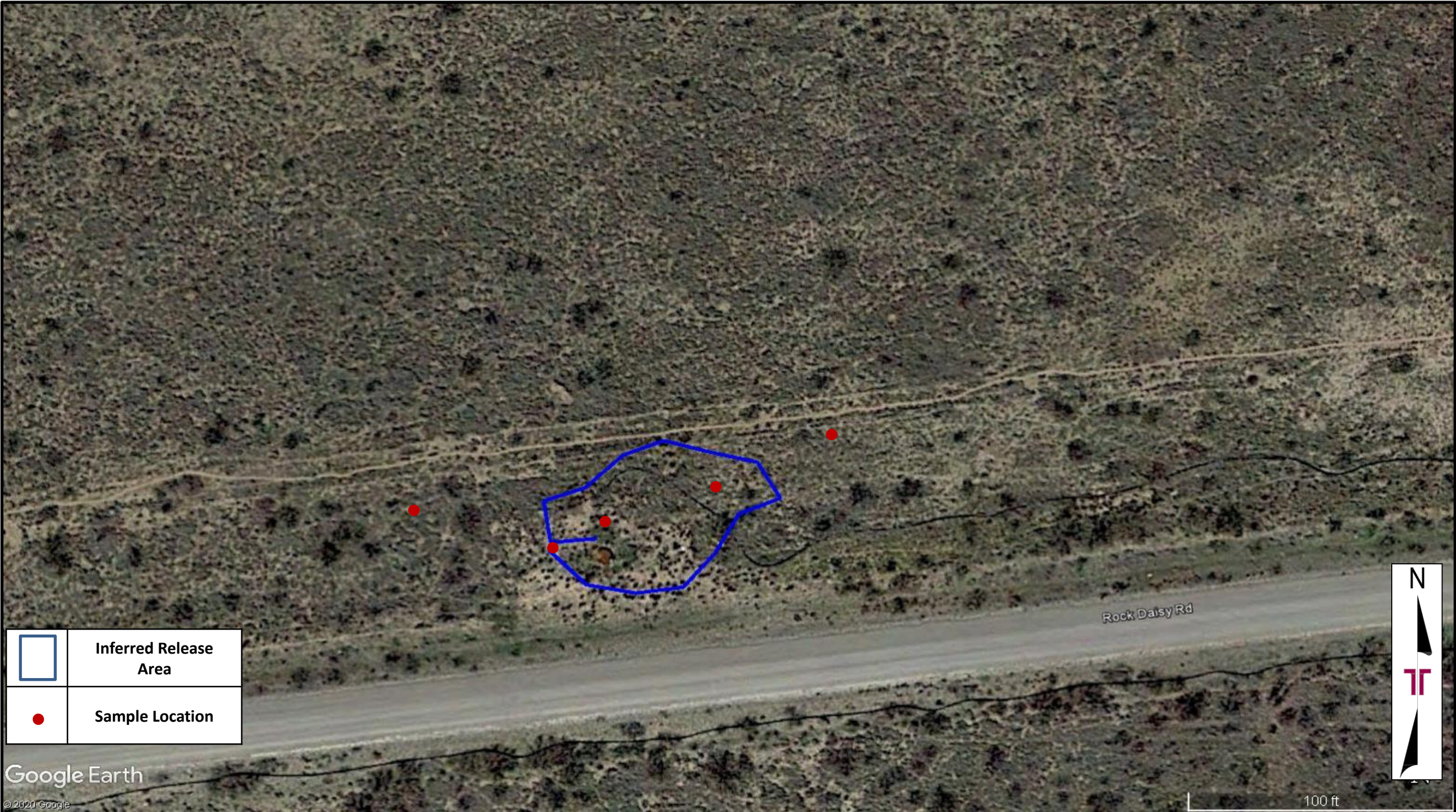
Figure 5 – Confirmation Concentration Map

Figure 6 – NMOSE POD Location Map

Figure 7 – Cave Karst Public UCP



Project No.	AR207089	 5827 50th St. Suite 1 Lubbock, Texas 79424 PH. (806) 300-0104 FAX. (806) 797 0947	Figure 1 – Topographic Map	
Scale:	As Shown		Holstun Water Line Release	
Source:	Google Earth		32.616751°, -104.488446°	
Image Date:	1978		Eddy County, New Mexico	



	Inferred Release Area
	Sample Location

Google Earth

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Project No.	AR207089
Scale:	As Shown
Source:	Google Earth
Image Date:	11/02/2017

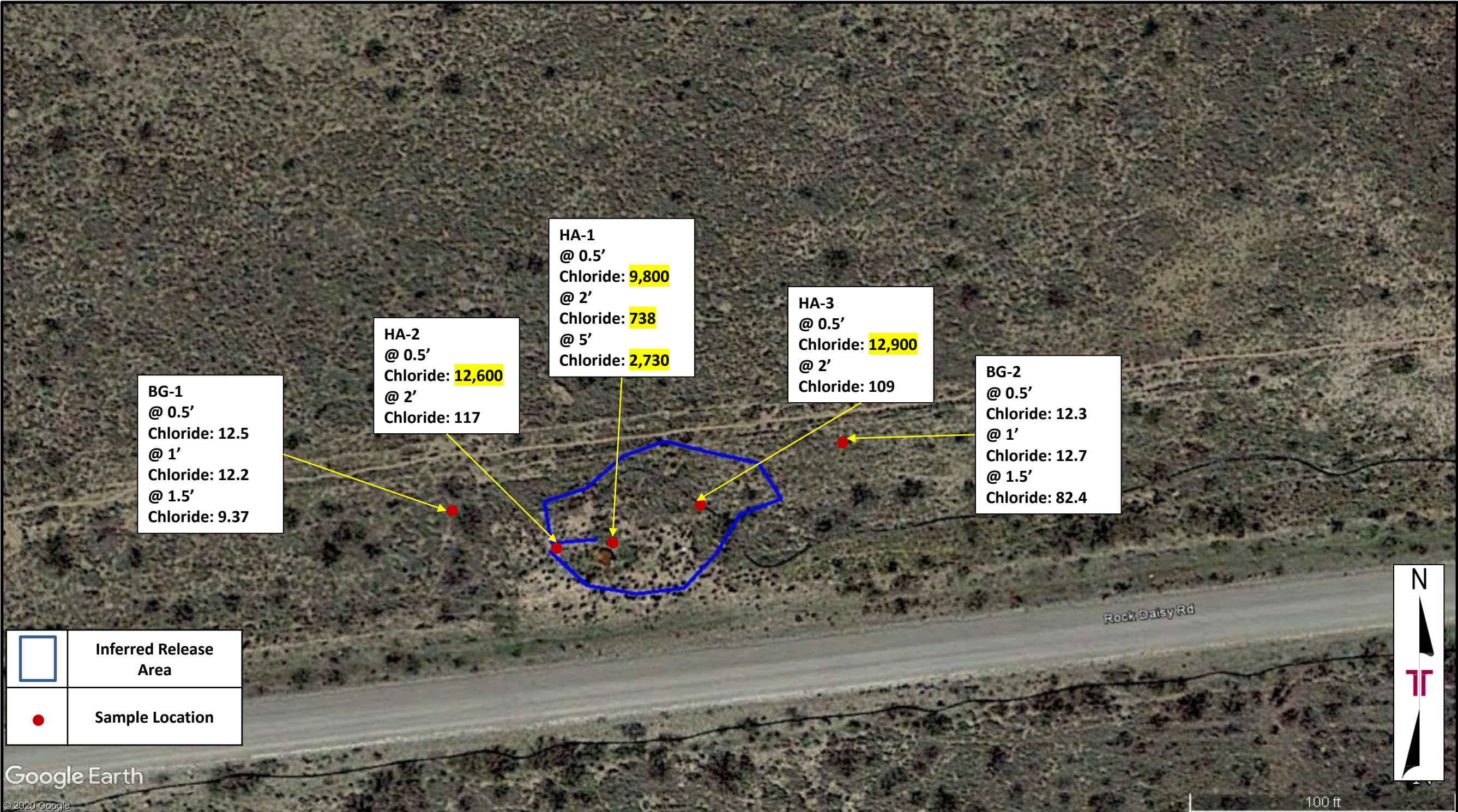


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Figure 2 – Site Map
Holstun Water Line Release 32.616751°, -104.488446° Eddy County, New Mexico



Google Earth

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Scale:	As Shown
Source:	Google Earth
Image Date:	11/02/2017

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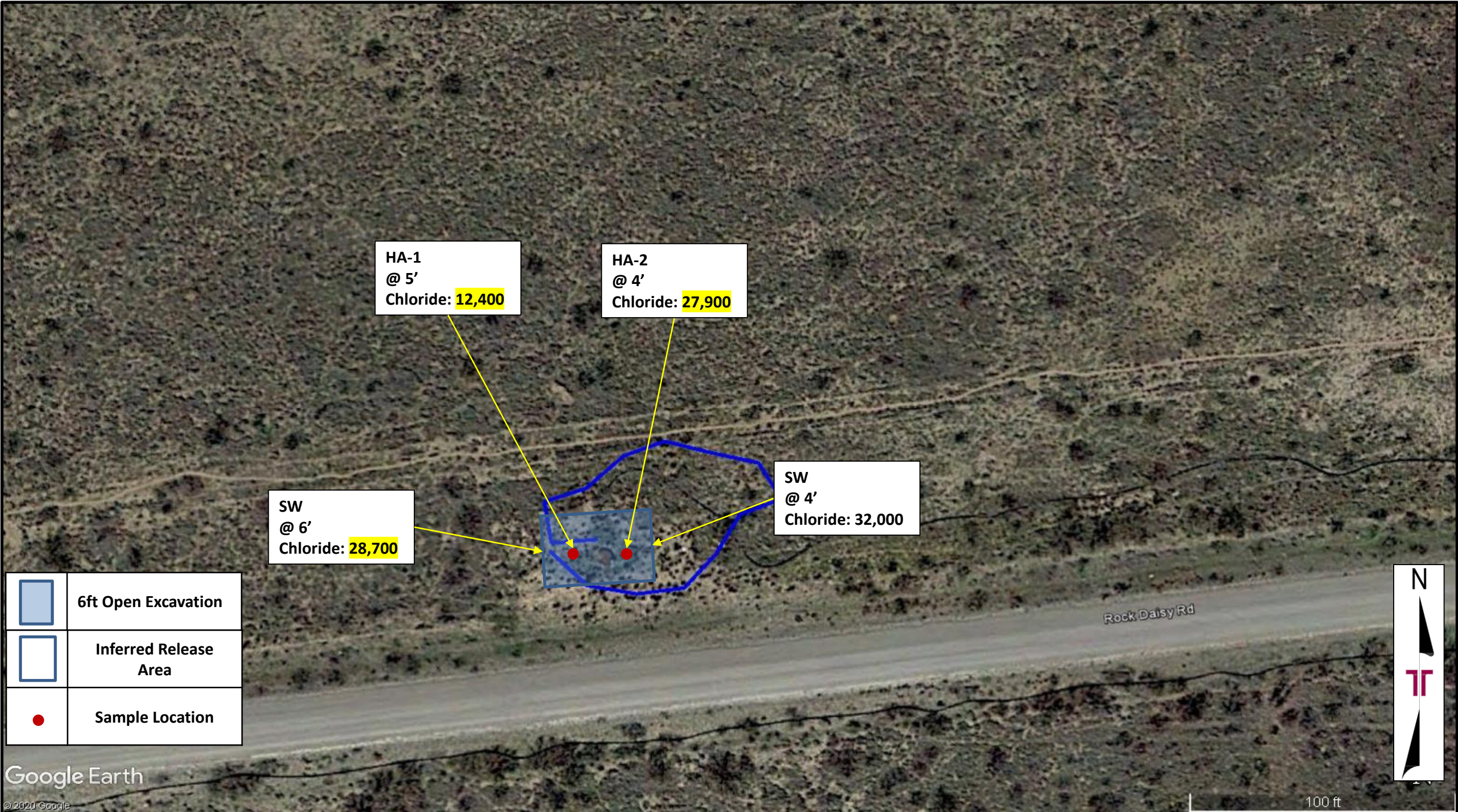
PH. (806) 300-0104

Lubbock, Texas 79424

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Figure 3 – Initial Contamination Concentration Map

Holstun Water Line Release
32.616751°, -104.488446°
Eddy County, New Mexico



Project No.	AR207089
Scale:	As Shown
Source:	Google Earth
Image Date:	11/02/2017

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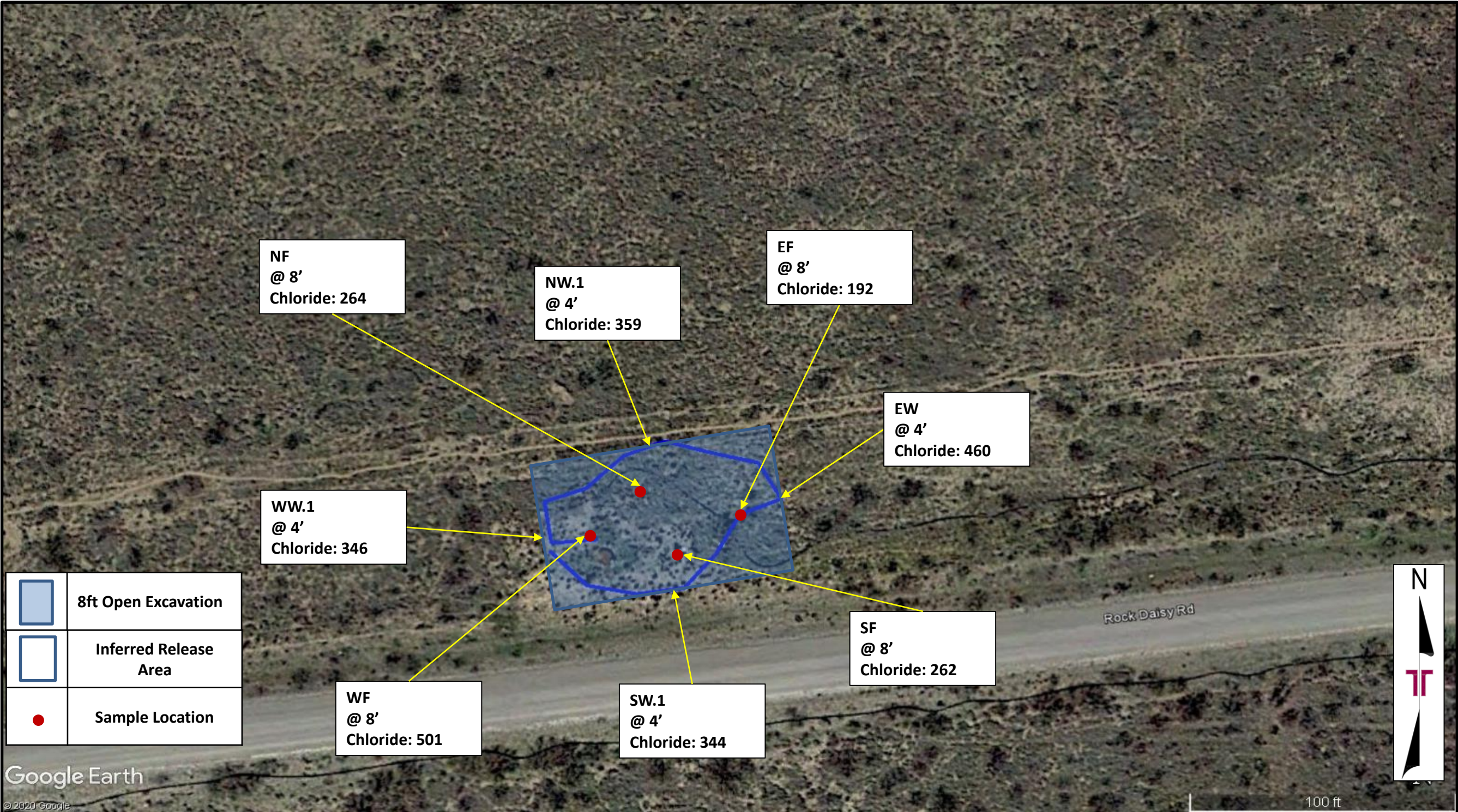
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Lubbock, Texas 79424

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Figure 4 – Additional Contamination Concentration Map
Holstun Water Line Release 32.616751°, -104.488446° Eddy County, New Mexico



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Source:	Google Earth
Image Date:	11/02/2017

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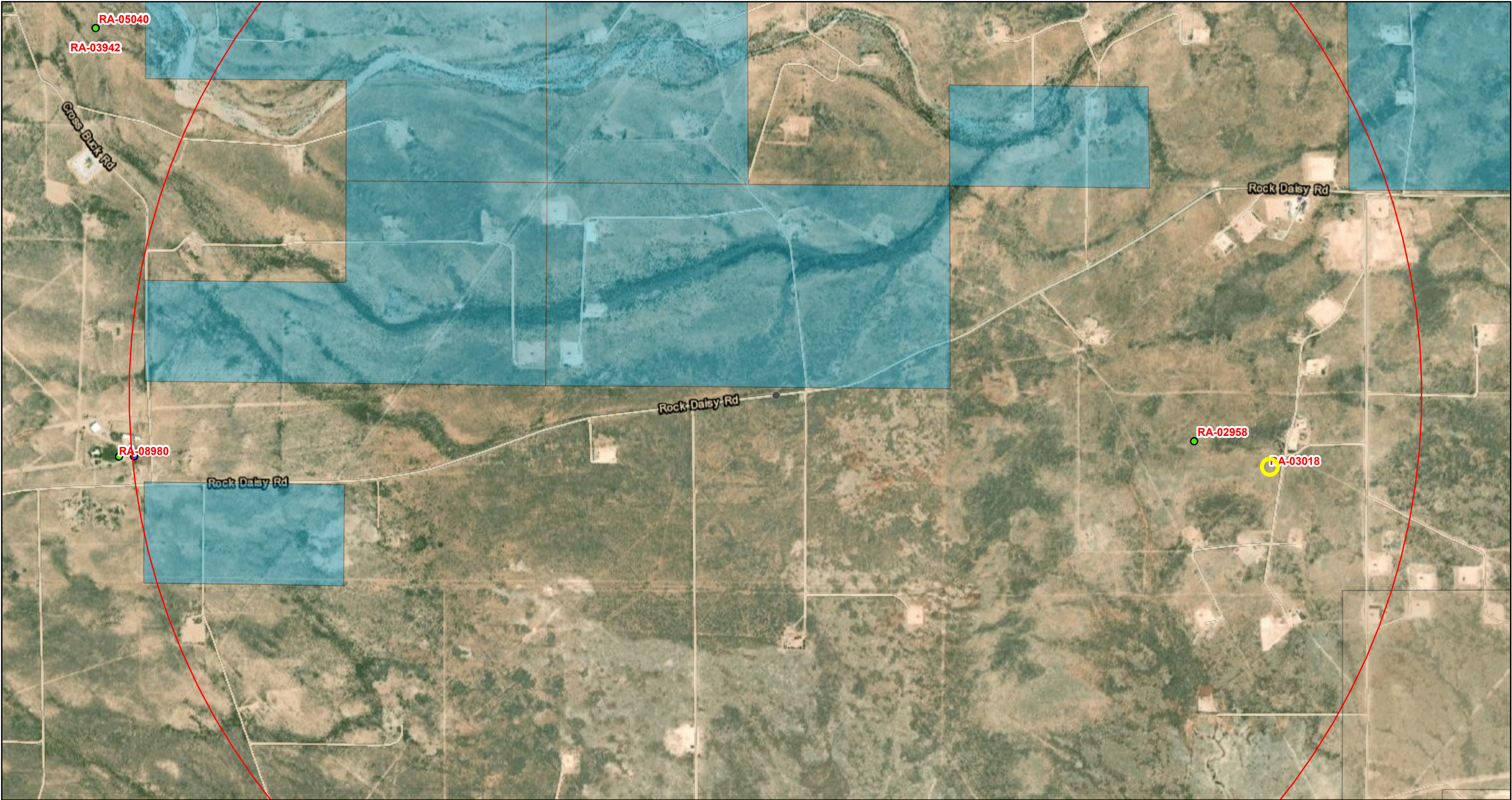
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Lubbock, Texas 79424
FAX. (806) 797 0947

Figure 5 – Confirmation Concentration Map

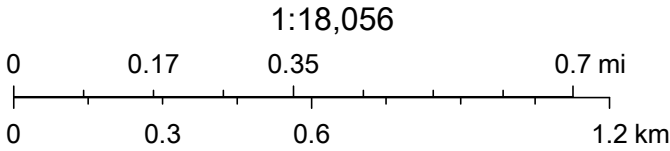
Holstun Water Line Release
32.616751°, -104.488446°
Eddy County, New Mexico

Figure 6 - NMOSE POD Location Map

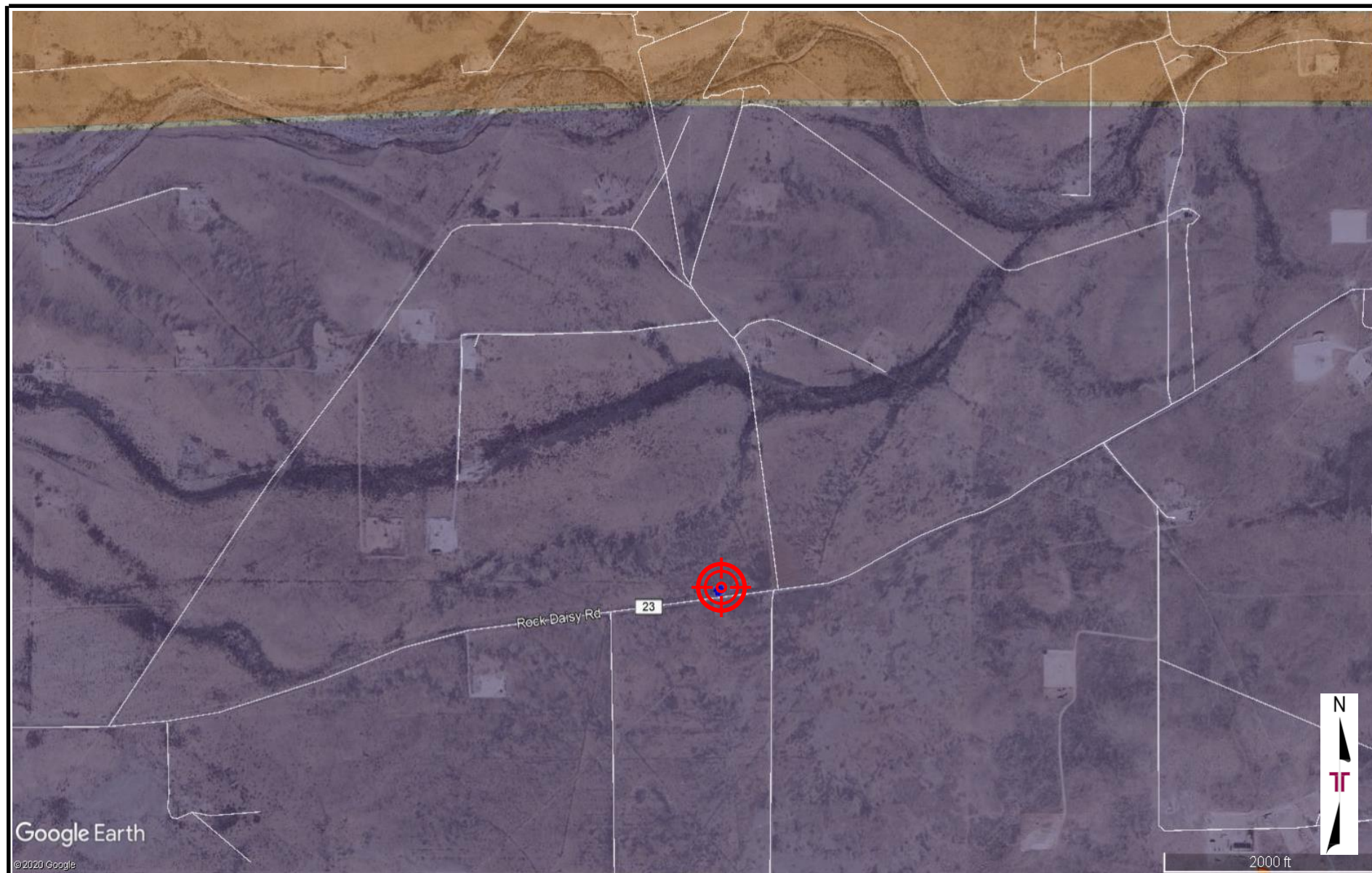


12/31/2020 9:32:33 AM

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



USDA FSA, GeoEye, Maxar, Esri, HERE, iPC, U.S. Department of Energy Office of Legacy Management, Esri, HERE, Garmin, iPC



Site Location

Project No.	AR207089
Scale:	As Shown
Source:	ESRI
Date:	02/04/2020

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Figure 7 - Cave Karst Public UCP

Holstun Water Line Release
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Eddy County, New Mexico

APPENDIX B – TABLES & PROCEDURES

Exhibit 1 – Soil Sampling Procedures

Table 1 – Closure Criteria for Soils Impacted by a Release

Table 2 – Soil Sample Analytical Results

EXHIBIT 1**SOIL SAMPLING PROCEDURES**Soil Sampling Procedures

Soil sampling for laboratory analysis was conducted according to NMOCD-approved industry standards or other NMOCD-approved procedures. Accepted NMOCD soil sampling procedures and laboratory analytical methods are as follows:

- Collect samples in clean, air-tight glass jars supplied by the laboratory which will conduct the analysis or from a reliable laboratory equipment supplier.
- Label the samples with a unique code for each sample.
- Cool and store samples with cold packs or on ice.
- Promptly ship the sample to the lab for analysis following chain of custody procedures.
- All samples must be analyzed within the holding times for the laboratory analytical method specified by EPA.

Analytical Methods

All soil samples must be analyzed using EPA methods, or by other NMOCD-approved methods and must be analyzed within the holding time specified by the method. Below are laboratory analytical methods the selected laboratory will use for analysis of soil samples analyzed for petroleum-related constituents.

- Chloride – EPA Method 300.0
- Total Petroleum Hydrocarbons – TPH (GRO+DRO+MRO) – EPA Method 8015M
- Benzene, toluene, ethylbenzene and total xylenes (BTEX) – EPA Method 8021B
- Benzene – EPA Method 8021B

Table 1			
Closure Criteria for Soils Impacted by a Release			
Minimum depth below any point within the horizontal boundary of the release to ground water less than 10,000 mg/L TDS	Constituent	Method*	Limit**
≤50 feet	Chloride***	EPA 300.0 or SM4500 Cl B	600 mg/kg
	TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015 M	100 mg/kg
	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 Method 8021B or 8260B	10 mg/kg
51 feet – 100 feet	Chloride***	EPA 300.0 or SM4500 Cl B	10,000 mg/kg
	TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015 M	2,500 mg/kg
	GRO+DRO	EPA SW-846 Method 8015 M	1,000 mg/kg
	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 Method 8021B or 8260B	10 mg/kg
>100 feet	Chloride***	EPA 300.0 or SM4500 Cl B	20,000 mg/kg
	TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015 M	2,500 mg/kg
	TPH (GRO+DRO)	EPA SW-846 Method 8015 M	1,000 mg/kg
	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 Method 8021B or 8260B	10 mg/kg

*Or other methods approved by the division

**Numerical limits or natural background level, whichever is greater

***This applies to releases of produced water or other fluids, which may contain chloride

TABLE 2 SOIL SAMPLE ANALYTICAL RESULTS - BTEX ¹ , Chloride ² , and TPH ³ Holstun Line Release Terracon Project No. AR207089									
Sample I.D.	Sample Depth (ft. bgs)	Sample Type	Sample Date	BTEX (mg/kg)	Chloride (mg/kg)	TPH (8015M) (mg/kg)			
						GRO	DRO	MRO	TOTAL
Background Samples (Off Pad)									
BG-1	0 - 0.5	Grab	05/15/20	Benzene - 0.113 Toluene - 0.315 Ethylbenzene - 0.0835 Total Xylenes - 0.0815 Total BTEX - 0.593	12.5	ND	ND	ND	ND
	1.5 - 2	Grab	05/15/20	Benzene - ND Toluene - 0.0884 Ethylbenzene - 0.0314 Total Xylenes - 0.0255 Total BTEX - 0.145	12.2	ND	ND	ND	ND
	4.5 - 5	Grab	05/15/20	Benzene - ND Toluene - 0.0309 Ethylbenzene - ND Total Xylenes - 0.0154 Total BTEX - 0.0463	9.37	ND	ND	ND	ND
BG-2	0 - 0.5	Grab	05/15/20	Benzene - 0.391 Toluene - 1.33 Ethylbenzene - 0.367 Total Xylenes - 0.304 Total BTEX - 2.39	12.3	20.1	ND	ND	20.1
	1.5 - 2	Grab	05/15/20	Benzene - ND Toluene - 0.102 Ethylbenzene - 0.0428 Total Xylenes - 0.0279 Total BTEX - 0.173	12.7	ND	ND	ND	ND
	4.5 - 5	Grab	05/15/20	Benzene - ND Toluene - 0.056 Ethylbenzene - 0.027 Total Xylenes - 0.232 Total BTEX - 0.106	82.4	ND	ND	ND	ND
NMOCD Reclamation Standards ⁴ (Applicable for Soils from the Surface to 4 ft. Below Grade Surface)				Benzene - 10 Toluene - N/A Ethylbenzene - N/A Total Xylenes - N/A Total BTEX - 50	600	N/A			100
NMOCD Remediation and Delineation Standards ⁵ (Applicable for Soils at Depths Greater than 4 ft. Below Grade Surface)				Benzene - 10 Toluene - N/A Ethylbenzene - N/A Total Xylenes - N/A Total BTEX - 50	20,000	1,000		N/A	2,500

1. BTEX = Benzene, toluene, ethylbenzene, total xylenes analyzed by EPA Method 8021B

2. Chloride = Chloride analyzed by EPA Method 300.

3. TPH = Total petroleum hydrocarbons analyzed by EPA Method 8015M (GRO/DRO/MRO)

4. New Mexico Administration Code (NMAC) Restoration, Reclamation, and Re-vegetation (19.15.29.13) New Mexico Administration Code (NMAC) – D (Reclamation of areas no longer in use) for soils extending to 4 ft. bgs

5. New Mexico Oil Conservation Division (NMOCD) Remediation and Delineation Standards are proposed in 19.15.29.12 NMAC - N, 8/14/2018

< = Constituent not detected above the indicated laboratory SDL

NA = Not Analyzed

N/A = Not Applicable

Bold and Highlight denotes concentrations that exceed the New Mexico Oil Conservation Division (NMOCD) Reclamation and/or Remediation and Delineation Standards.

TABLE 2 SOIL SAMPLE ANALYTICAL RESULTS - BTEX ¹ , Chloride ² , and TPH ³ Holstun Line Release Terracon Project No. AR207089									
Sample I.D.	Sample Depth (ft. bgs)	Sample Type	Sample Date	BTEX (mg/kg)	Chloride (mg/kg)	TPH (8015M) (mg/kg)			
						GRO	DRO	MRO	TOTAL
Initial Release Margin Samples (Off Pad)									
HA-1	0 - 0.5	Grab	05/15/20	Benzene - ND Toluene - 0.0925 Ethylbenzene - 0.0866 Total Xylenes - 0.124 Total BTEX - 0.303	9,800	21.4	651	254	926
	1.5 - 2	Grab	05/15/20	Benzene - ND Toluene - 0.248 Ethylbenzene - 0.12 Total Xylenes - 0.124 Total BTEX - 0.492	738	18.2	695	177	899
	4.5 - 5	Grab	05/15/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - 0.0116 Total BTEX - 0.0116	2,730	13.8	37.2	16.7	67.7
HA-2	0 - 0.5	Grab	05/15/20	Benzene - ND Toluene - 0.153 Ethylbenzene - 0.0825 Total Xylenes - 0.0845 Total BTEX - 0.32	12,600	ND	ND	ND	ND
	1.5 - 2	Grab	05/15/20	Benzene - ND Toluene - 0.0134 Ethylbenzene - ND Total Xylenes - ND Total BTEX - 0.0134	117	ND	ND	ND	ND
HA-3	0 - 0.5	Grab	05/15/20	Benzene - ND Toluene - 0.0931 Ethylbenzene - 0.0594 Total Xylenes - 0.0772 Total BTEX - 0.23	12,900	ND	ND	ND	ND
	1.5 - 2	Grab	05/15/20	Benzene - ND Toluene - 0.0402 Ethylbenzene - 0.0382 Total Xylenes - 0.0363 Total BTEX - 0.115	109	ND	ND	ND	ND
Second Release Margin Samples (Off Pad)									
HA-1	5.5 - 6	Grab	05/16/20	Benzene - 0.0932 Toluene - 0.16 Ethylbenzene - 0.0741 Total Xylenes - 0.198 Total BTEX - 0.525	12,400	4.40	NA	NA	4.40
HA-2	4.5 - 5	Grab	05/16/20	Benzene - 0.575 Toluene - 1.34 Ethylbenzene - 0.809 Total Xylenes - 1.45 Total BTEX - 4.17	27,900	10.9	NA	NA	10.9
SW-(3.5-4)	3.5 - 4	Composite	05/16/20	Benzene - NA Toluene - NA Ethylbenzene - NA Total Xylenes - NA Total BTEX - NA	32,000	26.6	NA	NA	26.6
SW-(5.5-6)	5.5 - 6	Composite	05/16/20	Benzene - 0.108 Toluene - 0.673 Ethylbenzene - 0.771 Total Xylenes - 1.49 Total BTEX - 3.04	28,700	15.2	NA	NA	15.2
NMOCD Reclamation Standards ⁴ (Applicable for Soils from the Surface to 4 ft. Below Grade Surface)				Benzene - 10 Toluene - N/A Ethylbenzene - N/A Total Xylenes - N/A Total BTEX - 50	600	N/A			100
NMOCD Remediation and Delineation Standards ⁵ (Applicable for Soils at Depths Greater than 4 ft. Below Grade Surface)				Benzene - 10 Toluene - N/A Ethylbenzene - N/A Total Xylenes - N/A Total BTEX - 50	20,000	1,000		N/A	2,500

1. BTEX = Benzene, toluene, ethylbenzene, total xylenes analyzed by EPA Method 8021B

2. Chloride = Chloride analyzed by EPA Method 300.

3. TPH = Total petroleum hydrocarbons analyzed by EPA Method 8015M (GRO/DRO/MRO)

4. New Mexico Administration Code (NMAC) Restoration, Reclamation, and Re-vegetation (19.15.29.13) New Mexico Administration Code (NMAC) – D (Reclamation of areas no longer in use) for soils extending to 4 ft. bgs

5. New Mexico Oil Conservation Division (NMOCD) Remediation and Delineation Standards are proposed in 19.15.29.12 NMAC - N, 8/14/2018

< = Constituent not detected above the indicated laboratory SDL

NA = Not Analyzed

N/A = Not Applicable

Bold and Highlight denotes concentrations that exceed the New Mexico Oil Conservation Division (NMOCD) Reclamation and/or Remediation and Delineation Standards.

TABLE 2 SOIL SAMPLE ANALYTICAL RESULTS - BTEX ¹ , Chloride ² , and TPH ³ Holstun Line Release Terracon Project No. AR207089									
Sample I.D.	Sample Depth (ft. bgs)	Sample Type	Sample Date	BTEX (mg/kg)	Chloride (mg/kg)	TPH (8015M) (mg/kg)			
						GRO	DRO	MRO	TOTAL
Confirmation Samples (Off Pad)									
NW-(3.5-4)	3.5 - 4	Composite	08/23/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	1,240	ND	ND	ND	ND
SW-(3.5-4)	3.5 - 4	Composite	08/23/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	1,550	ND	ND	ND	ND
WW-(3.5-4)	3.5 - 4	Composite	08/23/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	953	ND	ND	ND	ND
EW-(3.5-4)	3.5 - 4	Composite	08/23/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	460	ND	ND	ND	ND
NF-(7.5-8)	7.5 - 8	Composite	08/23/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	264	ND	ND	ND	ND
SF-(7.5-8)	7.5 - 8	Composite	08/23/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	262	ND	ND	ND	ND
WF-(7.5-8)	7.5 - 8	Composite	08/23/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	501	ND	82.5	ND	82.5
EF-(7.5-8)	7.5 - 8	Composite	08/23/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	192	ND	ND	ND	ND
NW.1	3.5 - 4	Composite	12/10/20	Benzene - ND Toluene - 0.012 Ethylbenzene - 0.0108 Total Xylenes - 0.0579 Total BTEX - 0.0807	359	ND	ND	ND	ND
SW.1	3.5 - 4	Composite	12/10/20	Benzene - 0.00209 Toluene - 0.023 Ethylbenzene - 0.0178 Total Xylenes - 0.103 Total BTEX - 0.146	344	ND	ND	ND	ND
WW.1	3.5 - 4	Composite	12/10/20	Benzene - ND Toluene - 0.0144 Ethylbenzene - 0.0132 Total Xylenes - 0.079 Total BTEX - 0.107	346	ND	ND	ND	ND
NMOCD Reclamation Standards ⁴ (Applicable for Soils from the Surface to 4 ft. Below Grade Surface)				Benzene - 10 Toluene - N/A Ethylbenzene - N/A Total Xylenes - N/A Total BTEX - 50	600	N/A			100
NMOCD Remediation and Delineation Standards ⁵ (Applicable for Soils at Depths Greater than 4 ft. Below Grade Surface)				Benzene - 10 Toluene - N/A Ethylbenzene - N/A Total Xylenes - N/A Total BTEX - 50	20,000	1,000		N/A	2,500

1. BTEX = Benzene, toluene, ethylbenzene, total xylenes analyzed by EPA Method 8021B

2. Chloride = Chloride analyzed by EPA Method 300.

3. TPH = Total petroleum hydrocarbons analyzed by EPA Method 8015M (GRO/DRO/MRO)

4. New Mexico Administration Code (NMAC) Restoration, Reclamation, and Re-vegetation (19.15.29.13) New Mexico Administration Code (NMAC) – D (Reclamation of areas no longer in use) for soils extending to 4 ft. bgs

5. New Mexico Oil Conservation Division (NMOCD) Remediation and Delineation Standards are proposed in 19.15.29.12 NMAC - N, 8/14/2018

< = Constituent not detected above the indicated laboratory SDL

NA = Not Analyzed

N/A = Not Applicable

Bold and Highlight denotes concentrations that exceed the New Mexico Oil Conservation Division (NMOCD) Reclamation and/or Remediation and Delineation Standards.

APPENDIX C – PHOTOGRAPHIC LOG

Holstun Water Line Release ■ Eddy County, New Mexico
January 7, 2021 ■ Terracon Project No. AR207089

Terracon



PHOTO 1: View of release point, facing west. 05/06/2020 / **TIME:** 4:31PM / **GPS:** 32.6168 -104.4888



PHOTO 2: View of site, facing south. 05/06/2020 / **TIME:** 4:31PM / **GPS:** 32.6168 -104.4888

Responsive ■ Resourceful ■ Reliable

Holstun Water Line Release ■ Eddy County, New Mexico
January 7, 2021 ■ Terracon Project No. AR207089

Terracon



PHOTO 3: View of site, facing east. 05/06/2020 / **TIME:** 4:31PM / **GPS:** 32.6168 -104.4890



PHOTO 4: View of eastern portion of release, facing north. 05/06/2020 / **TIME:** 4:32PM / **GPS:** 32.6168 -104.4886

Responsive ■ Resourceful ■ Reliable

Holstun Water Line Release ■ Eddy County, New Mexico
January 7, 2021 ■ Terracon Project No. AR207089

Terracon



PHOTO 5: View of BG-2, facing west. 05/06/2020 / **TIME:** 4:35PM / **GPS:** 32.6168 -104.4886



PHOTO 6: View of BG-1, facing east. 05/06/2020 / **TIME:** 4:35PM / **GPS:** 32.6168 -104.4890

Responsive ■ Resourceful ■ Reliable

Holstun Water Line Release ■ Eddy County, New Mexico
January 7, 2021 ■ Terracon Project No. AR207089

Terracon



PHOTO 7: View of HA-1, facing south. 05/06/2020 / **TIME:** 4:45PM / **GPS:** 32.6168 -104.4888



PHOTO 8: View of HA-1 and HA-2, facing west. 05/06/2020 / **TIME:** 4:46PM / **GPS:** 32.6168 -104.4888

Responsive ■ Resourceful ■ Reliable

Holstun Water Line Release ■ Eddy County, New Mexico
January 7, 2021 ■ Terracon Project No. AR207089

Terracon



PHOTO 9: View of HA-3, facing west. 05/06/2020 / **TIME:** 4:50PM / **GPS:** 32.6168 -104.4886



PHOTO 10: View near HA-1, after additional release, facing southwest. 05/11/2020 / **TIME:** 1:07PM / **GPS:** 32.6168 -104.4888

Responsive ■ Resourceful ■ Reliable

Holstun Water Line Release ■ Eddy County, New Mexico
January 7, 2021 ■ Terracon Project No. AR207089

Terracon



PHOTO 11: View of open excavation, additional release, facing west. 05/11/2020 / **TIME:** 1:21PM / **GPS:** 32.6168 -104.4886



PHOTO 12: View of open excavation, additional release, facing east. 05/11/2020 / **TIME:** 1:36PM / **GPS:** 32.6168 -104.4890

Responsive ■ Resourceful ■ Reliable

Holstun Water Line Release ■ Eddy County, New Mexico
January 7, 2021 ■ Terracon Project No. AR207089

Terracon



PHOTO 13: View of site, additional release, facing east. 05/11/2020 / **TIME:** 1:11PM / **GPS:** 32.6168 -104.4888



PHOTO 14: View of staining in pipe access, additional release, facing south. 05/11/2020 / **TIME:** 1:07PM / **GPS:** 32.6168 -104.4888

Responsive ■ Resourceful ■ Reliable

Holstun Water Line Release ■ Eddy County, New Mexico
January 7, 2021 ■ Terracon Project No. AR207089

Terracon



PHOTO 15: View of new header, facing north. 08/04/2020 / **TIME:** 1:21PM / **GPS:** 32.6168 -104.4888



PHOTO 16: View of new header, facing east. 08/04/2020 / **TIME:** 1:36PM / **GPS:** 32.6168 -104.4890

Responsive ■ Resourceful ■ Reliable

Holstun Water Line Release ■ Eddy County, New Mexico
January 7, 2021 ■ Terracon Project No. AR207089

Terracon



PHOTO 17: View of fresh staining north of site, facing northwest. 08/04/2020 / **TIME:** 1:21PM / **GPS:** 32.6168 -104.4886



PHOTO 18: View of trenching for vertical delineation, facing east. 06/25/2020 / **TIME:** 1:36PM / **GPS:** 32.6168 -104.4888

Responsive ■ Resourceful ■ Reliable

Holstun Water Line Release ■ Eddy County, New Mexico
January 7, 2021 ■ Terracon Project No. AR207089

Terracon



PHOTO 19: View of remediation, facing west. 08/20/2020 / **TIME:** 1:21PM / **GPS:** 32.6168 -104.4886



PHOTO 20: View of east end remediation, facing north. 08/20/2020 / **TIME:** 1:36PM / **GPS:** 32.6168 -104.4886

Responsive ■ Resourceful ■ Reliable

Holstun Water Line Release ■ Eddy County, New Mexico
January 7, 2021 ■ Terracon Project No. AR207089

Terracon



PHOTO 21: View of south end remediation, facing west. 08/20/2020 / **TIME:** 1:21PM / **GPS:** 32.6168 -104.4888



PHOTO 22: View of remediation, facing east. 08/20/2020 / **TIME:** 1:36PM / **GPS:** 32.6168 -104.4890

Responsive ■ Resourceful ■ Reliable

APPENDIX D – ANALYTICAL REPORT AND CHAIN OF CUSTODY



Certificate of Analysis Summary 661868

Terracon-Lubbock, Lubbock, TX

Project Name: Holstun Release

Project Id: AR207084
 Contact: Joseph Guesnier
 Project Location: Client: Spur Energy Partners

Date Received in Lab: Mon 05.18.2020 14:10
 Report Date: 06.01.2020 16:52
 Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	661868-001	661868-003	661868-005	661868-006	661868-008	661868-010
	<i>Field Id:</i>	BG-1 (0-0.5)	BG-1 (1.5-2)	BG-1 (4.5-5)	BG-2 (0-0.5)	BG-2 (1.5-2)	BG-2 (4.5-5)
	<i>Depth:</i>	0-0.5 ft	1.5-2 ft	4.5-5 ft	0-0.5 ft	1.5-2 ft	4.5-5 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	05.15.2020 11:55	05.15.2020 12:05	05.15.2020 12:15	05.15.2020 12:20	05.15.2020 12:30	05.15.2020 12:40
BTEX by EPA 8021B	<i>Extracted:</i>	05.19.2020 14:00	05.19.2020 14:00	05.19.2020 14:00	05.19.2020 14:00	05.19.2020 14:00	05.19.2020 14:00
	<i>Analyzed:</i>	05.19.2020 16:14	05.19.2020 18:03	05.19.2020 18:30	05.19.2020 18:56	05.19.2020 19:23	05.19.2020 19:50
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		0.113 0.0194	<0.00888 0.0196	<0.00873 0.0193	0.391 0.0188	<0.00840 0.0186	<0.00873 0.0193
Toluene		0.315 0.0194	0.0884 0.0196	0.0309 0.0193	1.33 0.0188	0.102 0.0186	0.0560 0.0193
Ethylbenzene		0.0835 0.0194	0.0314 0.0196	<0.00595 0.0193	0.367 0.0188	0.0428 0.0186	0.0270 0.0193
m,p-Xylenes		0.0621 0.0388	0.0255 J 0.0393	0.0154 J 0.0386	0.233 0.0376	0.0279 J 0.0372	0.0232 J 0.0386
o-Xylene		0.0194 J 0.0194	<0.00670 0.0196	<0.00658 0.0193	0.0714 0.0188	<0.00634 0.0186	<0.00658 0.0193
Total Xylenes		0.0815 0.0194	0.0255 0.0196	0.0154 J 0.0193	0.304 0.0188	0.0279 0.0186	0.0232 0.0193
Total BTEX		0.593 0.0194	0.145 0.0196	0.0463 0.0193	2.39 0.0188	0.173 0.0186	0.106 0.0193
Chloride by EPA 300 SUB: T104704215-19-30	<i>Extracted:</i>	05.20.2020 16:52	05.20.2020 16:52	05.20.2020 16:52	05.20.2020 16:52	05.20.2020 16:52	05.20.2020 16:52
	<i>Analyzed:</i>	05.20.2020 17:58	05.20.2020 18:33	05.20.2020 18:45	05.20.2020 19:08	05.20.2020 19:43	05.20.2020 19:55
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		12.5 9.96	12.2 9.96	9.37 J 9.84	12.3 10.2	12.7 10.1	82.4 9.90
TPH by SW8015 Mod SUB: T104704215-19-30	<i>Extracted:</i>	05.28.2020 14:54	05.28.2020 13:47	05.28.2020 13:50	05.28.2020 13:53	05.28.2020 13:56	05.28.2020 13:59
	<i>Analyzed:</i>	05.31.2020 22:22	05.31.2020 18:44	05.31.2020 19:04	05.29.2020 19:39	05.29.2020 19:59	05.29.2020 20:19
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<10.1 50.3	<9.94 49.7	<10.0 50.2	20.1 J 49.9	<9.94 49.7	<10.0 50.0
Diesel Range Organics (DRO)		<10.1 50.3	<9.94 49.7	<10.0 50.2	<9.97 49.9	<9.94 49.7	<10.0 50.0
Motor Oil Range Hydrocarbons (MRO)		<10.1 50.3	<9.94 49.7	<10.0 50.2	<9.97 49.9	<9.94 49.7	<10.0 50.0
Total TPH		<10.1 50.3	<9.94 49.7	<10.0 50.2	20.1 J 49.9	<9.94 49.7	<10.0 50.0

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Jessica Kramer
Project Manager



Certificate of Analysis Summary 661868

Terracon-Lubbock, Lubbock, TX

Project Name: Holstun Release

Project Id: AR207084
 Contact: Joseph Guesnier
 Project Location: Client: Spur Energy Partners

Date Received in Lab: Mon 05.18.2020 14:10
 Report Date: 06.01.2020 16:52
 Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	661868-011	661868-013	661868-015	661868-016	661868-017	661868-018
	<i>Field Id:</i>	HA-1 (0-0.5)	HA-1 (1.5-2)	HA-1 (4.5-5)	HA-2 (0-0.5)	HA-2 (1.5-2)	HA-3 (0-0.5)
	<i>Depth:</i>	0-0.5 ft	1.5-2 ft	4.5-5 ft	0-0.5 ft	1.5-2 ft	0-0.5 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	05.15.2020 12:45	05.15.2020 12:55	05.15.2020 13:05	05.15.2020 13:10	05.15.2020 13:20	05.15.2020 13:25
BTEX by EPA 8021B	<i>Extracted:</i>	05.19.2020 14:00	05.19.2020 14:00	05.19.2020 14:00	05.19.2020 14:00	05.19.2020 14:00	05.19.2020 14:00
	<i>Analyzed:</i>	05.20.2020 02:34	05.19.2020 20:17	05.19.2020 20:44	05.19.2020 21:11	05.19.2020 21:38	05.19.2020 23:53
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00890 0.0197	<0.00861 0.0190	<0.00871 0.0193	<0.00888 0.0196	<0.00866 0.0192	<0.00895 0.0198
Toluene		0.0925 0.0197	0.248 0.0190	<0.00451 0.0193	0.153 0.0196	0.0134 J 0.0192	0.0931 0.0198
Ethylbenzene		0.0866 0.0197	0.120 0.0190	<0.00593 0.0193	0.0825 0.0196	<0.00590 0.0192	0.0594 0.0198
m,p-Xylenes		0.0866 0.0394	0.0933 0.0381	0.0116 J 0.0385	0.0609 0.0393	<0.00653 0.0383	0.0515 0.0396
o-Xylene		0.0374 0.0197	0.0305 0.0190	<0.00657 0.0193	0.0236 0.0196	<0.00653 0.0192	0.0257 0.0198
Total Xylenes		0.124 0.0197	0.124 0.0190	0.0116 J 0.0193	0.0845 0.0196	<0.00653 0.0192	0.0772 0.0198
Total BTEX		0.303 0.0197	0.492 0.0190	0.0116 J 0.0193	0.320 0.0196	0.0134 J 0.0192	0.230 0.0198
Chloride by EPA 300 SUB: T104704215-19-30	<i>Extracted:</i>	05.20.2020 16:52	05.20.2020 16:52	05.20.2020 16:52	05.20.2020 16:52	05.20.2020 16:52	05.20.2020 16:52
	<i>Analyzed:</i>	05.20.2020 20:07	05.20.2020 20:19	05.20.2020 20:30	05.20.2020 20:42	05.20.2020 20:54	05.20.2020 21:17
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		9800 99.4	738 9.98	2730 10.2	12600 101	117 10.0	12900 99.8
TPH by SW8015 Mod SUB: T104704215-19-30	<i>Extracted:</i>	05.28.2020 14:02	05.28.2020 14:05	05.28.2020 14:08	05.28.2020 14:11	05.28.2020 14:14	05.28.2020 14:17
	<i>Analyzed:</i>	05.29.2020 13:51	05.29.2020 13:51	05.29.2020 14:11	05.31.2020 19:24	05.29.2020 20:38	05.29.2020 20:58
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		21.4 J 49.6	18.2 J 49.6	13.8 J 49.7	<9.91 49.6	<10.0 50.2	<9.93 49.7
Diesel Range Organics (DRO)		651 49.6	695 49.6	37.2 J 49.7	<9.91 49.6	<10.0 50.2	<9.93 49.7
Motor Oil Range Hydrocarbons (MRO)		254 49.6	177 49.6	16.7 J 49.7	<9.91 49.6	<10.0 50.2	<9.93 49.7
Total TPH		926 49.6	890 49.6	67.7 49.7	<9.91 49.6	<10.0 50.2	<9.93 49.7

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Jessica Kramer
Project Manager



Certificate of Analysis Summary 661868

Terracon-Lubbock, Lubbock, TX

Project Name: Holstun Release

Project Id: AR207084
 Contact: Joseph Guesnier
 Project Location: Client: Spur Energy Partners

Date Received in Lab: Mon 05.18.2020 14:10
 Report Date: 06.01.2020 16:52
 Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	661868-020					
	Field Id:	HA-3 (1.5-2)					
	Depth:	1.5-2 ft					
	Matrix:	SOIL					
	Sampled:	05.15.2020 13:35					
BTEX by EPA 8021B	Extracted:	05.19.2020 14:00					
	Analyzed:	05.20.2020 00:20					
	Units/RL:	mg/kg RL					
Benzene		<0.00864 0.0191					
Toluene		0.0402 0.0191					
Ethylbenzene		0.0382 0.0191					
m,p-Xylenes		0.0363 J 0.0382					
o-Xylene		<0.00652 0.0191					
Total Xylenes		0.0363 0.0191					
Total BTEX		0.115 0.0191					
Chloride by EPA 300 SUB: T104704215-19-30	Extracted:	05.20.2020 16:52					
	Analyzed:	05.20.2020 21:29					
	Units/RL:	mg/kg RL					
Chloride		109 10.0					
TPH by SW8015 Mod SUB: T104704215-19-30	Extracted:	05.28.2020 14:20					
	Analyzed:	05.29.2020 21:18					
	Units/RL:	mg/kg RL					
Gasoline Range Hydrocarbons (GRO)		<10.0 50.0					
Diesel Range Organics (DRO)		<10.0 50.0					
Motor Oil Range Hydrocarbons (MRO)		<10.0 50.0					
Total TPH		<10.0 50.0					

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Jessica Kramer
Project Manager



Analytical Report 661868

for

Terracon-Lubbock

Project Manager: Joseph Guesnier

Holstun Release

AR207084

06.01.2020

Collected By: Client



6701 Aberdeen, Suite 9 Lubbock, TX 79424

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-32), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-23), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-6)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



06.01.2020

Project Manager: **Joseph Guesnier**

Terracon-Lubbock

5827 50th st, Suite 1

Lubbock, TX 79424

Reference: XENCO Report No(s): **661868**

Holstun Release

Project Address: Client: Spur Energy Partners

Joseph Guesnier:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 661868. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 661868 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

A handwritten signature in black ink that reads 'Jessica Kramer'. The signature is written in a cursive, flowing style.

Jessica Kramer

Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Sample Cross Reference 661868

Terracon-Lubbock, Lubbock, TX

Holstun Release

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BG-1 (0-0.5)	S	05.15.2020 11:55	0 - 0.5 ft	661868-001
BG-1 (1.5-2)	S	05.15.2020 12:05	1.5 - 2 ft	661868-003
BG-1 (4.5-5)	S	05.15.2020 12:15	4.5 - 5 ft	661868-005
BG-2 (0-0.5)	S	05.15.2020 12:20	0 - 0.5 ft	661868-006
BG-2 (1.5-2)	S	05.15.2020 12:30	1.5 - 2 ft	661868-008
BG-2 (4.5-5)	S	05.15.2020 12:40	4.5 - 5 ft	661868-010
HA-1 (0-0.5)	S	05.15.2020 12:45	0 - 0.5 ft	661868-011
HA-1 (1.5-2)	S	05.15.2020 12:55	1.5 - 2 ft	661868-013
HA-1 (4.5-5)	S	05.15.2020 13:05	4.5 - 5 ft	661868-015
HA-2 (0-0.5)	S	05.15.2020 13:10	0 - 0.5 ft	661868-016
HA-2 (1.5-2)	S	05.15.2020 13:20	1.5 - 2 ft	661868-017
HA-3 (0-.5)	S	05.15.2020 13:25	0 - 0.5 ft	661868-018
HA-3 (1.5-2)	S	05.15.2020 13:35	1.5 - 2 ft	661868-020
BG-1 (0.5-1)	S	05.15.2020 12:00	0.5 - 1 ft	Not Analyzed
BG-1 (3-3.5)	S	05.15.2020 12:10	3 - 3.5 ft	Not Analyzed
BG-2 (0.5-1)	S	05.15.2020 12:25	0.5 - 1 ft	Not Analyzed
BG-2 (3-3.5)	S	05.15.2020 12:35	3 - 3.5 ft	Not Analyzed
HA-1 (0.5-1)	S	05.15.2020 12:50	0.5 - 1 ft	Not Analyzed
HA-1 (3-3.5)	S	05.15.2020 13:00	3 - 3.5 ft	Not Analyzed
HA-3 (0.5-1)	S	05.15.2020 13:30	0.5 - 1 ft	Not Analyzed

**CASE NARRATIVE****Client Name: Terracon-Lubbock****Project Name: Holstun Release**Project ID: AR207084
Work Order Number(s): 661868Report Date: 06.01.2020
Date Received: 05.18.2020

This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory.

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3126469 BTEX by EPA 8021B

Sample 661868-011 was diluted due to hydrocarbons beyond xylenes.



Certificate of Analytical Results 661868

Terracon-Lubbock, Lubbock, TX

Holstun Release

Sample Id: **BG-1 (0-0.5)**

Matrix: Soil

Date Received: 05.18.2020 14:10

Lab Sample Id: 661868-001

Date Collected: 05.15.2020 11:55

Sample Depth: 0 - 0.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture:

Analyst: JYM

Date Prep: 05.20.2020 16:52

Basis: Wet Weight

Seq Number: 3126586

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	12.5	9.96	0.353	mg/kg	05.20.2020 17:58		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DRU

% Moisture:

Analyst: ISU

Date Prep: 05.28.2020 14:54

Basis: Wet Weight

Seq Number: 3127459

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<10.1	50.3	10.1	mg/kg	05.31.2020 22:22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<10.1	50.3	10.1	mg/kg	05.31.2020 22:22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<10.1	50.3	10.1	mg/kg	05.31.2020 22:22	U	1
Total TPH	PHC635	<10.1	50.3	10.1	mg/kg	05.31.2020 22:22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	05.31.2020 22:22	
o-Terphenyl	84-15-1	99	%	70-135	05.31.2020 22:22	



Certificate of Analytical Results 661868

Terracon-Lubbock, Lubbock, TX

Holstun Release

Sample Id: **BG-1 (0-0.5)**

Matrix: Soil

Date Received: 05.18.2020 14:10

Lab Sample Id: 661868-001

Date Collected: 05.15.2020 11:55

Sample Depth: 0 - 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 05.19.2020 14:00

Basis: Wet Weight

Seq Number: 3126469

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.113	0.0194	0.00878	mg/kg	05.19.2020 16:14		1
Toluene	108-88-3	0.315	0.0194	0.00454	mg/kg	05.19.2020 16:14		1
Ethylbenzene	100-41-4	0.0835	0.0194	0.00598	mg/kg	05.19.2020 16:14		1
m,p-Xylenes	179601-23-1	0.0621	0.0388	0.00662	mg/kg	05.19.2020 16:14		1
o-Xylene	95-47-6	0.0194	0.0194	0.00662	mg/kg	05.19.2020 16:14	J	1
Total Xylenes	1330-20-7	0.0815	0.0194	0.00662	mg/kg	05.19.2020 16:14		1
Total BTEX		0.593	0.0194	0.00454	mg/kg	05.19.2020 16:14		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	106	%	68-120	05.19.2020 16:14			
a,a,a-Trifluorotoluene	98-08-8	104	%	71-121	05.19.2020 16:14			



Certificate of Analytical Results 661868

Terracon-Lubbock, Lubbock, TX

Holstun Release

Sample Id: **BG-1 (1.5-2)**

Matrix: Soil

Date Received: 05.18.2020 14:10

Lab Sample Id: 661868-003

Date Collected: 05.15.2020 12:05

Sample Depth: 1.5 - 2 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture:

Analyst: JYM

Date Prep: 05.20.2020 16:52

Basis: Wet Weight

Seq Number: 3126586

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	12.2	9.96	0.353	mg/kg	05.20.2020 18:33		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DRU

% Moisture:

Analyst: ISU

Date Prep: 05.28.2020 13:47

Basis: Wet Weight

Seq Number: 3127458

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.94	49.7	9.94	mg/kg	05.31.2020 18:44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<9.94	49.7	9.94	mg/kg	05.31.2020 18:44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<9.94	49.7	9.94	mg/kg	05.31.2020 18:44	U	1
Total TPH	PHC635	<9.94	49.7	9.94	mg/kg	05.31.2020 18:44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	05.31.2020 18:44	
o-Terphenyl	84-15-1	100	%	70-135	05.31.2020 18:44	



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Terracon-Lubbock, Lubbock, TX

Holstun Release

Sample Id: **BG-1 (1.5-2)**

Matrix: Soil

Date Received: 05.18.2020 14:10

Lab Sample Id: 661868-003

Date Collected: 05.15.2020 12:05

Sample Depth: 1.5 - 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 05.19.2020 14:00

Basis: Wet Weight

Seq Number: 3126469

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00888	0.0196	0.00888	mg/kg	05.19.2020 18:03	U	1
Toluene	108-88-3	0.0884	0.0196	0.00460	mg/kg	05.19.2020 18:03		1
Ethylbenzene	100-41-4	0.0314	0.0196	0.00605	mg/kg	05.19.2020 18:03		1
m,p-Xylenes	179601-23-1	0.0255	0.0393	0.00670	mg/kg	05.19.2020 18:03	J	1
o-Xylene	95-47-6	<0.00670	0.0196	0.00670	mg/kg	05.19.2020 18:03	U	1
Total Xylenes	1330-20-7	0.0255	0.0196	0.00670	mg/kg	05.19.2020 18:03		1
Total BTEX		0.145	0.0196	0.00460	mg/kg	05.19.2020 18:03		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	112	%	68-120	05.19.2020 18:03			
a,a,a-Trifluorotoluene	98-08-8	106	%	71-121	05.19.2020 18:03			



Certificate of Analytical Results 661868

Terracon-Lubbock, Lubbock, TX

Holstun Release

Sample Id: **BG-1 (4.5-5)**

Matrix: Soil

Date Received: 05.18.2020 14:10

Lab Sample Id: 661868-005

Date Collected: 05.15.2020 12:15

Sample Depth: 4.5 - 5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture:

Analyst: JYM

Date Prep: 05.20.2020 16:52

Basis: Wet Weight

Seq Number: 3126586

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	9.37	9.84	0.348	mg/kg	05.20.2020 18:45	J	1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DRU

% Moisture:

Analyst: ISU

Date Prep: 05.28.2020 13:50

Basis: Wet Weight

Seq Number: 3127458

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<10.0	50.2	10.0	mg/kg	05.31.2020 19:04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<10.0	50.2	10.0	mg/kg	05.31.2020 19:04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<10.0	50.2	10.0	mg/kg	05.31.2020 19:04	U	1
Total TPH	PHC635	<10.0	50.2	10.0	mg/kg	05.31.2020 19:04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	05.31.2020 19:04	
o-Terphenyl	84-15-1	104	%	70-135	05.31.2020 19:04	



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Terracon-Lubbock, Lubbock, TX

Holstun Release

Sample Id: **BG-1 (4.5-5)**

Matrix: Soil

Date Received: 05.18.2020 14:10

Lab Sample Id: 661868-005

Date Collected: 05.15.2020 12:15

Sample Depth: 4.5 - 5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 05.19.2020 14:00

Basis: Wet Weight

Seq Number: 3126469

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00873	0.0193	0.00873	mg/kg	05.19.2020 18:30	U	1
Toluene	108-88-3	0.0309	0.0193	0.00452	mg/kg	05.19.2020 18:30		1
Ethylbenzene	100-41-4	<0.00595	0.0193	0.00595	mg/kg	05.19.2020 18:30	U	1
m,p-Xylenes	179601-23-1	0.0154	0.0386	0.00658	mg/kg	05.19.2020 18:30	J	1
o-Xylene	95-47-6	<0.00658	0.0193	0.00658	mg/kg	05.19.2020 18:30	U	1
Total Xylenes	1330-20-7	0.0154	0.0193	0.00658	mg/kg	05.19.2020 18:30	J	1
Total BTEX		0.0463	0.0193	0.00452	mg/kg	05.19.2020 18:30		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	111	%	68-120	05.19.2020 18:30			
a,a,a-Trifluorotoluene	98-08-8	108	%	71-121	05.19.2020 18:30			



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Terracon-Lubbock, Lubbock, TX

Holstun Release

Sample Id: **BG-2 (0-0.5)**

Matrix: Soil

Date Received: 05.18.2020 14:10

Lab Sample Id: 661868-006

Date Collected: 05.15.2020 12:20

Sample Depth: 0 - 0.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture:

Analyst: JYM

Date Prep: 05.20.2020 16:52

Basis: Wet Weight

Seq Number: 3126586

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	12.3	10.2	0.360	mg/kg	05.20.2020 19:08		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DRU

% Moisture:

Analyst: ISU

Date Prep: 05.28.2020 13:53

Basis: Wet Weight

Seq Number: 3127458

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	20.1	49.9	9.97	mg/kg	05.29.2020 19:39	J	1
Diesel Range Organics (DRO)	C10C28DRO	<9.97	49.9	9.97	mg/kg	05.29.2020 19:39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<9.97	49.9	9.97	mg/kg	05.29.2020 19:39	U	1
Total TPH	PHC635	20.1	49.9	9.97	mg/kg	05.29.2020 19:39	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	05.29.2020 19:39	
o-Terphenyl	84-15-1	98	%	70-135	05.29.2020 19:39	



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Terracon-Lubbock, Lubbock, TX

Holstun Release

Sample Id: **BG-2 (0-0.5)**

Matrix: Soil

Date Received: 05.18.2020 14:10

Lab Sample Id: 661868-006

Date Collected: 05.15.2020 12:20

Sample Depth: 0 - 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 05.19.2020 14:00

Basis: Wet Weight

Seq Number: 3126469

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.391	0.0188	0.00850	mg/kg	05.19.2020 18:56		1
Toluene	108-88-3	1.33	0.0188	0.00440	mg/kg	05.19.2020 18:56		1
Ethylbenzene	100-41-4	0.367	0.0188	0.00579	mg/kg	05.19.2020 18:56		1
m,p-Xylenes	179601-23-1	0.233	0.0376	0.00641	mg/kg	05.19.2020 18:56		1
o-Xylene	95-47-6	0.0714	0.0188	0.00641	mg/kg	05.19.2020 18:56		1
Total Xylenes	1330-20-7	0.304	0.0188	0.00641	mg/kg	05.19.2020 18:56		1
Total BTEX		2.39	0.0188	0.00440	mg/kg	05.19.2020 18:56		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	109	%	68-120	05.19.2020 18:56			
a,a,a-Trifluorotoluene	98-08-8	101	%	71-121	05.19.2020 18:56			



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Terracon-Lubbock, Lubbock, TX

Holstun Release

Sample Id: **BG-2 (1.5-2)**

Matrix: Soil

Date Received: 05.18.2020 14:10

Lab Sample Id: 661868-008

Date Collected: 05.15.2020 12:30

Sample Depth: 1.5 - 2 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture:

Analyst: JYM

Date Prep: 05.20.2020 16:52

Basis: Wet Weight

Seq Number: 3126586

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	12.7	10.1	0.356	mg/kg	05.20.2020 19:43		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DRU

% Moisture:

Analyst: ISU

Date Prep: 05.28.2020 13:56

Basis: Wet Weight

Seq Number: 3127458

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.94	49.7	9.94	mg/kg	05.29.2020 19:59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<9.94	49.7	9.94	mg/kg	05.29.2020 19:59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<9.94	49.7	9.94	mg/kg	05.29.2020 19:59	U	1
Total TPH	PHC635	<9.94	49.7	9.94	mg/kg	05.29.2020 19:59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	05.29.2020 19:59	
o-Terphenyl	84-15-1	102	%	70-135	05.29.2020 19:59	



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Terracon-Lubbock, Lubbock, TX

Holstun Release

Sample Id: **BG-2 (1.5-2)**

Matrix: Soil

Date Received: 05.18.2020 14:10

Lab Sample Id: 661868-008

Date Collected: 05.15.2020 12:30

Sample Depth: 1.5 - 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 05.19.2020 14:00

Basis: Wet Weight

Seq Number: 3126469

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00840	0.0186	0.00840	mg/kg	05.19.2020 19:23	U	1
Toluene	108-88-3	0.102	0.0186	0.00435	mg/kg	05.19.2020 19:23		1
Ethylbenzene	100-41-4	0.0428	0.0186	0.00572	mg/kg	05.19.2020 19:23		1
m,p-Xylenes	179601-23-1	0.0279	0.0372	0.00634	mg/kg	05.19.2020 19:23	J	1
o-Xylene	95-47-6	<0.00634	0.0186	0.00634	mg/kg	05.19.2020 19:23	U	1
Total Xylenes	1330-20-7	0.0279	0.0186	0.00634	mg/kg	05.19.2020 19:23		1
Total BTEX		0.173	0.0186	0.00435	mg/kg	05.19.2020 19:23		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	114	%	68-120	05.19.2020 19:23	
a,a,a-Trifluorotoluene	98-08-8	107	%	71-121	05.19.2020 19:23	



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Terracon-Lubbock, Lubbock, TX

Holstun Release

Sample Id: **BG-2 (4.5-5)**

Matrix: Soil

Date Received: 05.18.2020 14:10

Lab Sample Id: 661868-010

Date Collected: 05.15.2020 12:40

Sample Depth: 4.5 - 5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture:

Analyst: JYM

Date Prep: 05.20.2020 16:52

Basis: Wet Weight

Seq Number: 3126586

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	82.4	9.90	0.350	mg/kg	05.20.2020 19:55		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DRU

% Moisture:

Analyst: ISU

Date Prep: 05.28.2020 13:59

Basis: Wet Weight

Seq Number: 3127458

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<10.0	50.0	10.0	mg/kg	05.29.2020 20:19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<10.0	50.0	10.0	mg/kg	05.29.2020 20:19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<10.0	50.0	10.0	mg/kg	05.29.2020 20:19	U	1
Total TPH	PHC635	<10.0	50.0	10.0	mg/kg	05.29.2020 20:19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	05.29.2020 20:19	
o-Terphenyl	84-15-1	103	%	70-135	05.29.2020 20:19	



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Terracon-Lubbock, Lubbock, TX

Holstun Release

Sample Id: **BG-2 (4.5-5)**

Matrix: Soil

Date Received: 05.18.2020 14:10

Lab Sample Id: 661868-010

Date Collected: 05.15.2020 12:40

Sample Depth: 4.5 - 5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 05.19.2020 14:00

Basis: Wet Weight

Seq Number: 3126469

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00873	0.0193	0.00873	mg/kg	05.19.2020 19:50	U	1
Toluene	108-88-3	0.0560	0.0193	0.00452	mg/kg	05.19.2020 19:50		1
Ethylbenzene	100-41-4	0.0270	0.0193	0.00595	mg/kg	05.19.2020 19:50		1
m,p-Xylenes	179601-23-1	0.0232	0.0386	0.00658	mg/kg	05.19.2020 19:50	J	1
o-Xylene	95-47-6	<0.00658	0.0193	0.00658	mg/kg	05.19.2020 19:50	U	1
Total Xylenes	1330-20-7	0.0232	0.0193	0.00658	mg/kg	05.19.2020 19:50		1
Total BTEX		0.106	0.0193	0.00452	mg/kg	05.19.2020 19:50		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	113	%	68-120	05.19.2020 19:50			
a,a,a-Trifluorotoluene	98-08-8	107	%	71-121	05.19.2020 19:50			



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Terracon-Lubbock, Lubbock, TX

Holstun Release

Sample Id: **HA-1 (0-0.5)**

Matrix: Soil

Date Received: 05.18.2020 14:10

Lab Sample Id: 661868-011

Date Collected: 05.15.2020 12:45

Sample Depth: 0 - 0.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture:

Analyst: JYM

Date Prep: 05.20.2020 16:52

Basis: Wet Weight

Seq Number: 3126586

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	9800	99.4	3.52	mg/kg	05.20.2020 20:07		10

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DRU

% Moisture:

Analyst: ISU

Date Prep: 05.28.2020 14:02

Basis: Wet Weight

Seq Number: 3127458

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	21.4	49.6	9.91	mg/kg	05.29.2020 13:51	J	1
Diesel Range Organics (DRO)	C10C28DRO	651	49.6	9.91	mg/kg	05.29.2020 13:51		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	254	49.6	9.91	mg/kg	05.29.2020 13:51		1
Total TPH	PHC635	926	49.6	9.91	mg/kg	05.29.2020 13:51		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	05.29.2020 13:51	
o-Terphenyl	84-15-1	89	%	70-135	05.29.2020 13:51	



Certificate of Analytical Results 661868

Terracon-Lubbock, Lubbock, TX

Holstun Release

Sample Id: **HA-1 (0-0.5)**

Matrix: Soil

Date Received: 05.18.2020 14:10

Lab Sample Id: 661868-011

Date Collected: 05.15.2020 12:45

Sample Depth: 0 - 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 05.19.2020 14:00

Basis: Wet Weight

Seq Number: 3126469

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00890	0.0197	0.00890	mg/kg	05.20.2020 02:34	U	1
Toluene	108-88-3	0.0925	0.0197	0.00461	mg/kg	05.20.2020 02:34		1
Ethylbenzene	100-41-4	0.0866	0.0197	0.00606	mg/kg	05.20.2020 02:34		1
m,p-Xylenes	179601-23-1	0.0866	0.0394	0.00671	mg/kg	05.20.2020 02:34		1
o-Xylene	95-47-6	0.0374	0.0197	0.00671	mg/kg	05.20.2020 02:34		1
Total Xylenes	1330-20-7	0.124	0.0197	0.00671	mg/kg	05.20.2020 02:34		1
Total BTEX		0.303	0.0197	0.00461	mg/kg	05.20.2020 02:34		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	115	%	68-120	05.20.2020 02:34			
a,a,a-Trifluorotoluene	98-08-8	101	%	71-121	05.20.2020 02:34			



Certificate of Analytical Results 661868

Terracon-Lubbock, Lubbock, TX

Holstun Release

Sample Id: **HA-1 (1.5-2)**

Matrix: Soil

Date Received: 05.18.2020 14:10

Lab Sample Id: 661868-013

Date Collected: 05.15.2020 12:55

Sample Depth: 1.5 - 2 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture:

Analyst: JYM

Date Prep: 05.20.2020 16:52

Basis: Wet Weight

Seq Number: 3126586

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	738	9.98	0.353	mg/kg	05.20.2020 20:19		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DRU

% Moisture:

Analyst: ISU

Date Prep: 05.28.2020 14:05

Basis: Wet Weight

Seq Number: 3127458

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	18.2	49.6	9.92	mg/kg	05.29.2020 13:51	J	1
Diesel Range Organics (DRO)	C10C28DRO	695	49.6	9.92	mg/kg	05.29.2020 13:51		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	177	49.6	9.92	mg/kg	05.29.2020 13:51		1
Total TPH	PHC635	890	49.6	9.92	mg/kg	05.29.2020 13:51		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	05.29.2020 13:51	
o-Terphenyl	84-15-1	99	%	70-135	05.29.2020 13:51	



Certificate of Analytical Results 661868

Terracon-Lubbock, Lubbock, TX

Holstun Release

Sample Id: **HA-1 (1.5-2)**

Matrix: Soil

Date Received: 05.18.2020 14:10

Lab Sample Id: 661868-013

Date Collected: 05.15.2020 12:55

Sample Depth: 1.5 - 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 05.19.2020 14:00

Basis: Wet Weight

Seq Number: 3126469

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00861	0.0190	0.00861	mg/kg	05.19.2020 20:17	U	1
Toluene	108-88-3	0.248	0.0190	0.00446	mg/kg	05.19.2020 20:17		1
Ethylbenzene	100-41-4	0.120	0.0190	0.00587	mg/kg	05.19.2020 20:17		1
m,p-Xylenes	179601-23-1	0.0933	0.0381	0.00650	mg/kg	05.19.2020 20:17		1
o-Xylene	95-47-6	0.0305	0.0190	0.00650	mg/kg	05.19.2020 20:17		1
Total Xylenes	1330-20-7	0.124	0.0190	0.00650	mg/kg	05.19.2020 20:17		1
Total BTEX		0.492	0.0190	0.00446	mg/kg	05.19.2020 20:17		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	110	%	68-120	05.19.2020 20:17			
a,a,a-Trifluorotoluene	98-08-8	106	%	71-121	05.19.2020 20:17			



Certificate of Analytical Results 661868

Terracon-Lubbock, Lubbock, TX

Holstun Release

Sample Id: **HA-1 (4.5-5)**

Matrix: Soil

Date Received: 05.18.2020 14:10

Lab Sample Id: 661868-015

Date Collected: 05.15.2020 13:05

Sample Depth: 4.5 - 5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture:

Analyst: JYM

Date Prep: 05.20.2020 16:52

Basis: Wet Weight

Seq Number: 3126586

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2730	10.2	0.360	mg/kg	05.20.2020 20:30		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DRU

% Moisture:

Analyst: ISU

Date Prep: 05.28.2020 14:08

Basis: Wet Weight

Seq Number: 3127458

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	13.8	49.7	9.94	mg/kg	05.29.2020 14:11	J	1
Diesel Range Organics (DRO)	C10C28DRO	37.2	49.7	9.94	mg/kg	05.29.2020 14:11	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	16.7	49.7	9.94	mg/kg	05.29.2020 14:11	J	1
Total TPH	PHC635	67.7	49.7	9.94	mg/kg	05.29.2020 14:11		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	05.29.2020 14:11	
o-Terphenyl	84-15-1	99	%	70-135	05.29.2020 14:11	



Certificate of Analytical Results 661868

Terracon-Lubbock, Lubbock, TX

Holstun Release

Sample Id: **HA-1 (4.5-5)**

Matrix: Soil

Date Received: 05.18.2020 14:10

Lab Sample Id: 661868-015

Date Collected: 05.15.2020 13:05

Sample Depth: 4.5 - 5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 05.19.2020 14:00

Basis: Wet Weight

Seq Number: 3126469

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00871	0.0193	0.00871	mg/kg	05.19.2020 20:44	U	1
Toluene	108-88-3	<0.00451	0.0193	0.00451	mg/kg	05.19.2020 20:44	U	1
Ethylbenzene	100-41-4	<0.00593	0.0193	0.00593	mg/kg	05.19.2020 20:44	U	1
m,p-Xylenes	179601-23-1	0.0116	0.0385	0.00657	mg/kg	05.19.2020 20:44	J	1
o-Xylene	95-47-6	<0.00657	0.0193	0.00657	mg/kg	05.19.2020 20:44	U	1
Total Xylenes	1330-20-7	0.0116	0.0193	0.00657	mg/kg	05.19.2020 20:44	J	1
Total BTEX		0.0116	0.0193	0.00451	mg/kg	05.19.2020 20:44	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	114	%	68-120	05.19.2020 20:44	
a,a,a-Trifluorotoluene	98-08-8	108	%	71-121	05.19.2020 20:44	



Certificate of Analytical Results 661868

Terracon-Lubbock, Lubbock, TX

Holstun Release

Sample Id: **HA-2 (0-0.5)**

Matrix: Soil

Date Received: 05.18.2020 14:10

Lab Sample Id: 661868-016

Date Collected: 05.15.2020 13:10

Sample Depth: 0 - 0.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture:

Analyst: JYM

Date Prep: 05.20.2020 16:52

Basis: Wet Weight

Seq Number: 3126586

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	12600	101	3.59	mg/kg	05.20.2020 20:42		10

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DRU

% Moisture:

Analyst: ISU

Date Prep: 05.28.2020 14:11

Basis: Wet Weight

Seq Number: 3127458

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.91	49.6	9.91	mg/kg	05.31.2020 19:24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<9.91	49.6	9.91	mg/kg	05.31.2020 19:24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<9.91	49.6	9.91	mg/kg	05.31.2020 19:24	U	1
Total TPH	PHC635	<9.91	49.6	9.91	mg/kg	05.31.2020 19:24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	05.31.2020 19:24	
o-Terphenyl	84-15-1	103	%	70-135	05.31.2020 19:24	



Certificate of Analytical Results 661868

Terracon-Lubbock, Lubbock, TX

Holstun Release

Sample Id: **HA-2 (0-0.5)**

Matrix: Soil

Date Received: 05.18.2020 14:10

Lab Sample Id: 661868-016

Date Collected: 05.15.2020 13:10

Sample Depth: 0 - 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 05.19.2020 14:00

Basis: Wet Weight

Seq Number: 3126469

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00888	0.0196	0.00888	mg/kg	05.19.2020 21:11	U	1
Toluene	108-88-3	0.153	0.0196	0.00460	mg/kg	05.19.2020 21:11		1
Ethylbenzene	100-41-4	0.0825	0.0196	0.00605	mg/kg	05.19.2020 21:11		1
m,p-Xylenes	179601-23-1	0.0609	0.0393	0.00670	mg/kg	05.19.2020 21:11		1
o-Xylene	95-47-6	0.0236	0.0196	0.00670	mg/kg	05.19.2020 21:11		1
Total Xylenes	1330-20-7	0.0845	0.0196	0.00670	mg/kg	05.19.2020 21:11		1
Total BTEX		0.320	0.0196	0.00460	mg/kg	05.19.2020 21:11		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	114	%	68-120	05.19.2020 21:11	
a,a,a-Trifluorotoluene	98-08-8	105	%	71-121	05.19.2020 21:11	



Certificate of Analytical Results 661868

Terracon-Lubbock, Lubbock, TX

Holstun Release

Sample Id: HA-2 (1.5-2)

Matrix: Soil

Date Received: 05.18.2020 14:10

Lab Sample Id: 661868-017

Date Collected: 05.15.2020 13:20

Sample Depth: 1.5 - 2 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture:

Analyst: JYM

Date Prep: 05.20.2020 16:52

Basis: Wet Weight

Seq Number: 3126586

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	117	10.0	0.355	mg/kg	05.20.2020 20:54		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DRU

% Moisture:

Analyst: ISU

Date Prep: 05.28.2020 14:14

Basis: Wet Weight

Seq Number: 3127458

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<10.0	50.2	10.0	mg/kg	05.29.2020 20:38	U	1
Diesel Range Organics (DRO)	C10C28DRO	<10.0	50.2	10.0	mg/kg	05.29.2020 20:38	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<10.0	50.2	10.0	mg/kg	05.29.2020 20:38	U	1
Total TPH	PHC635	<10.0	50.2	10.0	mg/kg	05.29.2020 20:38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	05.29.2020 20:38	
o-Terphenyl	84-15-1	97	%	70-135	05.29.2020 20:38	



Certificate of Analytical Results 661868

Terracon-Lubbock, Lubbock, TX

Holstun Release

Sample Id: **HA-2 (1.5-2)**

Matrix: Soil

Date Received: 05.18.2020 14:10

Lab Sample Id: 661868-017

Date Collected: 05.15.2020 13:20

Sample Depth: 1.5 - 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 05.19.2020 14:00

Basis: Wet Weight

Seq Number: 3126469

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00866	0.0192	0.00866	mg/kg	05.19.2020 21:38	U	1
Toluene	108-88-3	0.0134	0.0192	0.00448	mg/kg	05.19.2020 21:38	J	1
Ethylbenzene	100-41-4	<0.00590	0.0192	0.00590	mg/kg	05.19.2020 21:38	U	1
m,p-Xylenes	179601-23-1	<0.00653	0.0383	0.00653	mg/kg	05.19.2020 21:38	U	1
o-Xylene	95-47-6	<0.00653	0.0192	0.00653	mg/kg	05.19.2020 21:38	U	1
Total Xylenes	1330-20-7	<0.00653	0.0192	0.00653	mg/kg	05.19.2020 21:38	U	1
Total BTEX		0.0134	0.0192	0.00448	mg/kg	05.19.2020 21:38	J	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	116	%	68-120	05.19.2020 21:38			
a,a,a-Trifluorotoluene	98-08-8	104	%	71-121	05.19.2020 21:38			



Certificate of Analytical Results 661868

Terracon-Lubbock, Lubbock, TX

Holstun Release

Sample Id: HA-3 (0-.5)

Matrix: Soil

Date Received: 05.18.2020 14:10

Lab Sample Id: 661868-018

Date Collected: 05.15.2020 13:25

Sample Depth: 0 - 0.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture:

Analyst: JYM

Date Prep: 05.20.2020 16:52

Basis: Wet Weight

Seq Number: 3126586

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	12900	99.8	3.53	mg/kg	05.20.2020 21:17		10

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DRU

% Moisture:

Analyst: ISU

Date Prep: 05.28.2020 14:17

Basis: Wet Weight

Seq Number: 3127458

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.93	49.7	9.93	mg/kg	05.29.2020 20:58	U	1
Diesel Range Organics (DRO)	C10C28DRO	<9.93	49.7	9.93	mg/kg	05.29.2020 20:58	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<9.93	49.7	9.93	mg/kg	05.29.2020 20:58	U	1
Total TPH	PHC635	<9.93	49.7	9.93	mg/kg	05.29.2020 20:58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	05.29.2020 20:58	
o-Terphenyl	84-15-1	106	%	70-135	05.29.2020 20:58	



Certificate of Analytical Results 661868

Terracon-Lubbock, Lubbock, TX

Holstun Release

Sample Id: **HA-3 (0-.5)**

Matrix: Soil

Date Received: 05.18.2020 14:10

Lab Sample Id: 661868-018

Date Collected: 05.15.2020 13:25

Sample Depth: 0 - 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 05.19.2020 14:00

Basis: Wet Weight

Seq Number: 3126469

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00895	0.0198	0.00895	mg/kg	05.19.2020 23:53	U	1
Toluene	108-88-3	0.0931	0.0198	0.00463	mg/kg	05.19.2020 23:53		1
Ethylbenzene	100-41-4	0.0594	0.0198	0.00610	mg/kg	05.19.2020 23:53		1
m,p-Xylenes	179601-23-1	0.0515	0.0396	0.00675	mg/kg	05.19.2020 23:53		1
o-Xylene	95-47-6	0.0257	0.0198	0.00675	mg/kg	05.19.2020 23:53		1
Total Xylenes	1330-20-7	0.0772	0.0198	0.00675	mg/kg	05.19.2020 23:53		1
Total BTEX		0.230	0.0198	0.00463	mg/kg	05.19.2020 23:53		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	114	%	68-120	05.19.2020 23:53			
a,a,a-Trifluorotoluene	98-08-8	104	%	71-121	05.19.2020 23:53			



Certificate of Analytical Results 661868

Terracon-Lubbock, Lubbock, TX

Holstun Release

Sample Id: **HA-3 (1.5-2)**

Matrix: Soil

Date Received: 05.18.2020 14:10

Lab Sample Id: 661868-020

Date Collected: 05.15.2020 13:35

Sample Depth: 1.5 - 2 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture:

Analyst: JYM

Date Prep: 05.20.2020 16:52

Basis: Wet Weight

Seq Number: 3126586

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	109	10.0	0.355	mg/kg	05.20.2020 21:29		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DRU

% Moisture:

Analyst: ISU

Date Prep: 05.28.2020 14:20

Basis: Wet Weight

Seq Number: 3127458

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<10.0	50.0	10.0	mg/kg	05.29.2020 21:18	U	1
Diesel Range Organics (DRO)	C10C28DRO	<10.0	50.0	10.0	mg/kg	05.29.2020 21:18	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<10.0	50.0	10.0	mg/kg	05.29.2020 21:18	U	1
Total TPH	PHC635	<10.0	50.0	10.0	mg/kg	05.29.2020 21:18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	05.29.2020 21:18	
o-Terphenyl	84-15-1	103	%	70-135	05.29.2020 21:18	



Certificate of Analytical Results 661868

Terracon-Lubbock, Lubbock, TX

Holstun Release

Sample Id: **HA-3 (1.5-2)**

Matrix: Soil

Date Received: 05.18.2020 14:10

Lab Sample Id: 661868-020

Date Collected: 05.15.2020 13:35

Sample Depth: 1.5 - 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 05.19.2020 14:00

Basis: Wet Weight

Seq Number: 3126469

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00864	0.0191	0.00864	mg/kg	05.20.2020 00:20	U	1
Toluene	108-88-3	0.0402	0.0191	0.00447	mg/kg	05.20.2020 00:20		1
Ethylbenzene	100-41-4	0.0382	0.0191	0.00589	mg/kg	05.20.2020 00:20		1
m,p-Xylenes	179601-23-1	0.0363	0.0382	0.00652	mg/kg	05.20.2020 00:20	J	1
o-Xylene	95-47-6	<0.00652	0.0191	0.00652	mg/kg	05.20.2020 00:20	U	1
Total Xylenes	1330-20-7	0.0363	0.0191	0.00652	mg/kg	05.20.2020 00:20		1
Total BTEX		0.115	0.0191	0.00447	mg/kg	05.20.2020 00:20		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	114	%	68-120	05.20.2020 00:20	
a,a,a-Trifluorotoluene	98-08-8	107	%	71-121	05.20.2020 00:20	



Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

****** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



Terracon-Lubbock Holstun Release

Analytical Method: Chloride by EPA 300

Seq Number: 3126586

MB Sample Id: 7703771-1-BLK

Matrix: Solid

LCS Sample Id: 7703771-1-BKS

Prep Method: E300P

Date Prep: 05.20.2020

LCSD Sample Id: 7703771-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.354	100	100	100	101	101	80-120	1	20	mg/kg	05.20.2020 17:35	

Analytical Method: Chloride by EPA 300

Seq Number: 3126586

Parent Sample Id: 661868-001

Matrix: Soil

MS Sample Id: 661868-001 S

Prep Method: E300P

Date Prep: 05.20.2020

MSD Sample Id: 661868-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	12.5	99.8	108	96	109	97	80-120	1	20	mg/kg	05.20.2020 18:10	

Analytical Method: Chloride by EPA 300

Seq Number: 3126586

Parent Sample Id: 661868-020

Matrix: Soil

MS Sample Id: 661868-020 S

Prep Method: E300P

Date Prep: 05.20.2020

MSD Sample Id: 661868-020 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	109	100	206	97	205	96	80-120	0	20	mg/kg	05.20.2020 22:04	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3127458

MB Sample Id: 7704262-1-BLK

Matrix: Solid

LCS Sample Id: 7704262-1-BKS

Prep Method: SW8015P

Date Prep: 05.28.2020

LCSD Sample Id: 7704262-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<10.0	1000	848	85	865	87	70-135	2	35	mg/kg	05.29.2020 18:19	
Diesel Range Organics (DRO)	<10.0	1000	1010	101	978	98	70-135	3	35	mg/kg	05.29.2020 18:19	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	103		110		106		70-135	%	05.29.2020 18:19
o-Terphenyl	105		103		100		70-135	%	05.29.2020 18:19

Analytical Method: TPH by SW8015 Mod

Seq Number: 3127459

MB Sample Id: 7704264-1-BLK

Matrix: Solid

LCS Sample Id: 7704264-1-BKS

Prep Method: SW8015P

Date Prep: 05.28.2020

LCSD Sample Id: 7704264-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<10.0	1000	866	87	864	86	70-135	0	35	mg/kg	05.29.2020 14:11	
Diesel Range Organics (DRO)	<10.0	1000	1000	100	996	100	70-135	0	35	mg/kg	05.29.2020 14:11	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	97		110		112		70-135	%	05.29.2020 14:11
o-Terphenyl	107		106		106		70-135	%	05.29.2020 14:11

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Terracon-Lubbock

Holstun Release

Analytical Method: TPH by SW8015 Mod

Seq Number: 3127458

Matrix: Solid

Prep Method: SW8015P

Date Prep: 05.28.2020

MB Sample Id: 7704262-1-BLK

Parameter

Motor Oil Range Hydrocarbons (MRO)

MB
Result

<10.0

Units

mg/kg

Analysis
Date

05.31.2020 14:20

Flag

Analytical Method: TPH by SW8015 Mod

Seq Number: 3127459

Matrix: Solid

Prep Method: SW8015P

Date Prep: 05.28.2020

MB Sample Id: 7704264-1-BLK

Parameter

Motor Oil Range Hydrocarbons (MRO)

MB
Result

<10.0

Units

mg/kg

Analysis
Date

05.31.2020 14:40

Flag

Analytical Method: TPH by SW8015 Mod

Seq Number: 3127458

Matrix: Soil

Prep Method: SW8015P

Date Prep: 05.28.2020

Parent Sample Id: 661942-003

MS Sample Id: 661942-003 S

MSD Sample Id: 661942-003 SD

Parameter

Gasoline Range Hydrocarbons (GRO)

Parent
Result

21.5

Spike
Amount

999

MS
Result

866

MS
%Rec

85

MSD
Result

926

MSD
%Rec

90

Limits

70-135

%RPD

7

RPD
Limit

35

Units

mg/kg

Analysis
Date

05.29.2020 19:19

Flag

Diesel Range Organics (DRO)

<9.99

999

1010

101

1100

110

70-135

9

35

mg/kg

05.29.2020 19:19

Surrogate

1-Chlorooctane

MS
%Rec

108

MS
FlagMSD
%Rec

115

MSD
Flag

Limits

70-135

Units

%

Analysis
Date

05.29.2020 19:19

o-Terphenyl

103

116

70-135

%

05.29.2020 19:19

Analytical Method: TPH by SW8015 Mod

Seq Number: 3127459

Matrix: Soil

Prep Method: SW8015P

Date Prep: 05.28.2020

Parent Sample Id: 661868-001

MS Sample Id: 661868-001 S

MSD Sample Id: 661868-001 SD

Parameter

Gasoline Range Hydrocarbons (GRO)

Parent
Result

<10.1

Spike
Amount

1010

MS
Result

952

MS
%Rec

94

MSD
Result

908

MSD
%Rec

91

Limits

70-135

%RPD

5

RPD
Limit

35

Units

mg/kg

Analysis
Date

05.29.2020 14:50

Flag

Diesel Range Organics (DRO)

<10.1

1010

1140

113

1080

108

70-135

5

35

mg/kg

05.29.2020 14:50

Surrogate

1-Chlorooctane

MS
%Rec

118

MS
FlagMSD
%Rec

113

MSD
Flag

Limits

70-135

Units

%

Analysis
Date

05.29.2020 14:50

o-Terphenyl

119

117

70-135

%

05.29.2020 14:50

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Terracon-Lubbock Holstun Release

Analytical Method: BTEX by EPA 8021B

Seq Number: 3126469

MB Sample Id: 7703666-1-BLK

Matrix: Solid

LCS Sample Id: 7703666-1-BKS

Prep Method: SW5035A

Date Prep: 05.19.2020

LCSD Sample Id: 7703666-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00904	2.00	2.01	101	1.99	100	55-120	1	20	mg/kg	05.19.2020 13:11	
Toluene	<0.00468	2.00	1.99	100	1.95	98	77-120	2	20	mg/kg	05.19.2020 13:11	
Ethylbenzene	<0.00616	2.00	1.99	100	1.97	99	77-120	1	20	mg/kg	05.19.2020 13:11	
m,p-Xylenes	<0.00682	4.00	3.96	99	3.91	98	78-120	1	20	mg/kg	05.19.2020 13:11	
o-Xylene	<0.00682	2.00	1.98	99	1.98	99	78-120	0	20	mg/kg	05.19.2020 13:11	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	107		100		98		68-120	%	05.19.2020 13:11
a,a,a-Trifluorotoluene	109		96		95		71-121	%	05.19.2020 13:11

Analytical Method: BTEX by EPA 8021B

Seq Number: 3126469

Parent Sample Id: 661868-001

Matrix: Soil

MS Sample Id: 661868-001 S

Prep Method: SW5035A

Date Prep: 05.19.2020

MSD Sample Id: 661868-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	0.113	1.80	1.83	95	2.01	97	54-120	9	25	mg/kg	05.19.2020 16:42	
Toluene	0.315	1.80	2.04	96	2.26	100	57-120	10	25	mg/kg	05.19.2020 16:42	
Ethylbenzene	0.0835	1.80	1.95	104	2.18	108	58-131	11	25	mg/kg	05.19.2020 16:42	
m,p-Xylenes	0.0621	3.60	3.81	104	4.26	108	62-124	11	25	mg/kg	05.19.2020 16:42	
o-Xylene	0.0194	1.80	1.89	104	2.11	107	62-124	11	25	mg/kg	05.19.2020 16:42	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	98		96		68-120	%	05.19.2020 16:42
a,a,a-Trifluorotoluene	94		95		71-121	%	05.19.2020 16:42

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec

CHAIN OF CUSTODY RECORD

Terracon

Office Location: Lubbock

Laboratory: Xenco
Address: 6701 Aberdeen
Lubbock, Texas 79424

Phone: _____
Contact: J. Guesnier 806-544-9276
SRS #: _____

Project Manager: J. Guesnier
Sampler's Name: J. Guesnier

Project Number: AR207084

Project Name: *Holston line Release*
Gas south water Dist site

Identifying Marks of Sample(s)

Matrix	Date	Time	Comp	Grab	No. Type of Containers	End Depth	Start Depth	4 oz Glass	60 ml VOA	5035 kit	ANALYSIS REQUESTED	Hold	Lab Sample ID
S	5/15/2020	11:55		X		0	0.5	X			X	X	1
S	5/15/2020	12:00		X		0.5	1	X			X	X	2
S	5/15/2020	12:05		X		1.5	2	X			X	X	3
S	5/15/2020	12:10		X		3	3.5	X			X	X	4
S	5/15/2020	12:15		X		4.5	5	X			X	X	5
S	5/15/2020	12:20		X		0	0.5	X			X	X	6
S	5/15/2020	12:25		X		0.5	1	X			X	X	7
S	5/15/2020	12:30		X		1.5	2	X			X	X	8
S	5/15/2020	12:35		X		3	3.5	X			X	X	9
S	5/15/2020	12:40		X		4.5	5	X			X	X	10
S	5/15/2020	12:45		X		0	0.5	X			X	X	11
S	5/15/2020	12:50		X		0.5	1	X			X	X	12
S	5/15/2020	12:55		X		1.5	2	X			X	X	13
S	5/15/2020	13:00		X		3	3.5	X			X	X	14
S	5/15/2020	13:05		X		4.5	5	X			X	X	15

TURNAROUND TIME
Relinquished by (Signature): _____
Relinquished by (Signature): _____
Relinquished by (Signature): _____
Relinquished by (Signature): _____

Normal ☒ 24-Hour Rush ☐ TRRP Laboratory Review Checklist

Date: 5-18-20 Time: 2:10
Date: _____ Time: _____
Date: _____ Time: _____
Date: _____ Time: _____

Received by (Signature): _____
Received by (Signature): _____
Received by (Signature): _____
Received by (Signature): _____

Notes: Check Spur Energy Partners e-mail results to:
bryant.mcdray@terracon.com
erin.loyd@terracon.com
lguesnier@terracon.com

Matrix Container: WW-Wastewater VOA, 40 ml vial
W-Water A/G-Air Glass 1L
S-Soil 250 ml - Glass wide mouth
L-Liquid 9/0-Plastic or other
C-Charcoal tube SL-Sludge

Lubbock Office ■ 5827 50th Street, Suite 1 ■ Lubbock, Texas 79424 ■ 806-300-0140

Responsive ■ Resourceful ■ Reliable

661868

Terracon

Laboratory: Xenco
Address: 6701 Aberdeen
Lubbock, Texas 79424

Office Location Lubbock

Project Manager J. Guesnier
Sampler's Name J. Guesnier

Phone:
Contact: J. Guesnier 806-544-9276
SRS #:

Sampler's Signature

Project Number AR207084
Project Name *Holston line Release*
at South Water District

Identifying Marks of Sample(s)

Start Depth End Depth

No. Type of Containers

4 oz Glass 60 ml VOA 5035 Kit

TPH Extended 8015

Chloride (EPA Method 300)

BTEX (EPA Method 8021B)

Hold

Lab Sample ID

16

17

18

19

20

Page 2 of 2

LAB USE ONLY
DUE DATE: 11/18

TEMP OF COOLER
WHEN RECEIVED (°C) 20.0

CHAIN OF CUSTODY RECORD

ANALYSIS REQUESTED

YES NO

NOTES: Client: Spur Energy Partners
e-mail results to:
bryant.mcbrayer@terracon.com
erin.loyd@terracon.com
jrguesnier@terracon.com

Matrix

Container

WW-Wastewater

VOA - 40 ml Vial

W - Water

A/G - Amber Glass 1L

S - Soil

250 ml - Glass wide mouth

L - Liquid

A - Air Bag

C - Charcoal tube

SL - Sludge

P/O - Plastic or other

TURNAROUND TIME

Relinquished by (Signature)

Date: 5-18-20

Time: 2:10

Relinquished by (Signature)

Date:

Time:

Relinquished by (Signature)

Date:

Time:

Relinquished by (Signature)

Date:

Time:

Relinquished by (Signature)

Date:

Time:

Relinquished by (Signature)

Date:

Time:

Relinquished by (Signature)

Date:

Time:

Relinquished by (Signature)

Date:

Time:

Inter-Office Shipment

IOS Number : **63962**

Date/Time: 05.19.2020

Created by: Brenda Ward

Please send report to: Jessica Kramer

Lab# From: **Lubbock**

Delivery Priority:

Address: 6701 Aberdeen, Suite 9 Lubbock, TX 79424

Lab# To: **Houston**

Air Bill No.: 770502983275

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
661868-001	S	BG-1 (0-0.5)	05.15.2020 11:55	E300_CL	Chloride by EPA 300	05.25.2020	06.12.2020	JKR	CL	
661868-001	S	BG-1 (0-0.5)	05.15.2020 11:55	SW8015MOD_NM	TPH by SW8015 Mod	05.25.2020	05.29.2020 11:55	JKR	PHCC10C28 PHCC28C3	
661868-001	S	BG-1 (0-0.5)	05.15.2020 11:55	SW8015DRO-ORO	TPH DRO-ORO by SW-846 8015	HOLD	05.29.2020 11:55	JKR	PHCD	
661868-003	S	BG-1 (1.5-2)	05.15.2020 12:05	E300_CL	Chloride by EPA 300	05.25.2020	06.12.2020	JKR	CL	
661868-003	S	BG-1 (1.5-2)	05.15.2020 12:05	SW8015MOD_NM	TPH by SW8015 Mod	05.25.2020	05.29.2020 12:05	JKR	PHCC10C28 PHCC28C3	
661868-003	S	BG-1 (1.5-2)	05.15.2020 12:05	SW8015DRO-ORO	TPH DRO-ORO by SW-846 8015	HOLD	05.29.2020 12:05	JKR	PHCD	
661868-005	S	BG-1 (4.5-5)	05.15.2020 12:15	E300_CL	Chloride by EPA 300	05.25.2020	06.12.2020	JKR	CL	
661868-005	S	BG-1 (4.5-5)	05.15.2020 12:15	SW8015MOD_NM	TPH by SW8015 Mod	05.25.2020	05.29.2020 12:15	JKR	PHCC10C28 PHCC28C3	
661868-005	S	BG-1 (4.5-5)	05.15.2020 12:15	SW8015DRO-ORO	TPH DRO-ORO by SW-846 8015	HOLD	05.29.2020 12:15	JKR	PHCD	
661868-006	S	BG-2 (0-0.5)	05.15.2020 12:20	SW8015MOD_NM	TPH by SW8015 Mod	05.25.2020	05.29.2020 12:20	JKR	PHCC10C28 PHCC28C3	
661868-006	S	BG-2 (0-0.5)	05.15.2020 12:20	SW8015DRO-ORO	TPH DRO-ORO by SW-846 8015	HOLD	05.29.2020 12:20	JKR	PHCD	
661868-006	S	BG-2 (0-0.5)	05.15.2020 12:20	E300_CL	Chloride by EPA 300	05.25.2020	06.12.2020	JKR	CL	
661868-008	S	BG-2 (1.5-2)	05.15.2020 12:30	E300_CL	Chloride by EPA 300	05.25.2020	06.12.2020	JKR	CL	
661868-008	S	BG-2 (1.5-2)	05.15.2020 12:30	SW8015MOD_NM	TPH by SW8015 Mod	05.25.2020	05.29.2020 12:30	JKR	PHCC10C28 PHCC28C3	
661868-008	S	BG-2 (1.5-2)	05.15.2020 12:30	SW8015DRO-ORO	TPH DRO-ORO by SW-846 8015	HOLD	05.29.2020 12:30	JKR	PHCD	
661868-010	S	BG-2 (4.5-5)	05.15.2020 12:40	E300_CL	Chloride by EPA 300	05.25.2020	06.12.2020	JKR	CL	
661868-010	S	BG-2 (4.5-5)	05.15.2020 12:40	SW8015DRO-ORO	TPH DRO-ORO by SW-846 8015	HOLD	05.29.2020 12:40	JKR	PHCD	
661868-010	S	BG-2 (4.5-5)	05.15.2020 12:40	SW8015MOD_NM	TPH by SW8015 Mod	05.25.2020	05.29.2020 12:40	JKR	PHCC10C28 PHCC28C3	
661868-011	S	HA-1 (0-0.5)	05.15.2020 12:45	E300_CL	Chloride by EPA 300	05.25.2020	06.12.2020	JKR	CL	
661868-011	S	HA-1 (0-0.5)	05.15.2020 12:45	SW8015DRO-ORO	TPH DRO-ORO by SW-846 8015	HOLD	05.29.2020 12:45	JKR	PHCD	
661868-011	S	HA-1 (0-0.5)	05.15.2020 12:45	SW8015MOD_NM	TPH by SW8015 Mod	05.25.2020	05.29.2020 12:45	JKR	PHCC10C28 PHCC28C3	
661868-013	S	HA-1 (1.5-2)	05.15.2020 12:55	SW8015DRO-ORO	TPH DRO-ORO by SW-846 8015	HOLD	05.29.2020 12:55	JKR	PHCD	
661868-013	S	HA-1 (1.5-2)	05.15.2020 12:55	SW8015MOD_NM	TPH by SW8015 Mod	05.25.2020	05.29.2020 12:55	JKR	PHCC10C28 PHCC28C3	
661868-013	S	HA-1 (1.5-2)	05.15.2020 12:55	E300_CL	Chloride by EPA 300	05.25.2020	06.12.2020	JKR	CL	
661868-015	S	HA-1 (4.5-5)	05.15.2020 13:05	E300_CL	Chloride by EPA 300	05.25.2020	06.12.2020	JKR	CL	

Inter-Office Shipment

IOS Number : **63962**

Date/Time: 05.19.2020

Created by: Brenda Ward

Please send report to: Jessica Kramer

Lab# From: **Lubbock**

Delivery Priority:

Address: 6701 Aberdeen, Suite 9 Lubbock, TX 79424

Lab# To: **Houston**

Air Bill No.: 770502983275

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
661868-015	S	HA-1 (4.5-5)	05.15.2020 13:05	SW8015DRO-ORO	TPH DRO-ORO by SW-846 8015	HOLD	05.29.2020 13:05	JKR	PHCD	
661868-015	S	HA-1 (4.5-5)	05.15.2020 13:05	SW8015MOD_NM	TPH by SW8015 Mod	05.25.2020	05.29.2020 13:05	JKR	PHCC10C28 PHCC28C3	
661868-016	S	HA-2 (0-0.5)	05.15.2020 13:10	SW8015MOD_NM	TPH by SW8015 Mod	05.25.2020	05.29.2020 13:10	JKR	PHCC10C28 PHCC28C3	
661868-016	S	HA-2 (0-0.5)	05.15.2020 13:10	E300_CL	Chloride by EPA 300	05.25.2020	06.12.2020	JKR	CL	
661868-016	S	HA-2 (0-0.5)	05.15.2020 13:10	SW8015DRO-ORO	TPH DRO-ORO by SW-846 8015	HOLD	05.29.2020 13:10	JKR	PHCD	
661868-017	S	HA-2 (1.5-2)	05.15.2020 13:20	SW8015MOD_NM	TPH by SW8015 Mod	05.25.2020	05.29.2020 13:20	JKR	PHCC10C28 PHCC28C3	
661868-017	S	HA-2 (1.5-2)	05.15.2020 13:20	E300_CL	Chloride by EPA 300	05.25.2020	06.12.2020	JKR	CL	
661868-017	S	HA-2 (1.5-2)	05.15.2020 13:20	SW8015DRO-ORO	TPH DRO-ORO by SW-846 8015	HOLD	05.29.2020 13:20	JKR	PHCD	
661868-018	S	HA-3 (0-.5)	05.15.2020 13:25	SW8015DRO-ORO	TPH DRO-ORO by SW-846 8015	HOLD	05.29.2020 13:25	JKR	PHCD	
661868-018	S	HA-3 (0-.5)	05.15.2020 13:25	SW8015MOD_NM	TPH by SW8015 Mod	05.25.2020	05.29.2020 13:25	JKR	PHCC10C28 PHCC28C3	
661868-018	S	HA-3 (0-.5)	05.15.2020 13:25	E300_CL	Chloride by EPA 300	05.25.2020	06.12.2020	JKR	CL	
661868-020	S	HA-3 (1.5-2)	05.15.2020 13:35	SW8015DRO-ORO	TPH DRO-ORO by SW-846 8015	HOLD	05.29.2020 13:35	JKR	PHCD	
661868-020	S	HA-3 (1.5-2)	05.15.2020 13:35	E300_CL	Chloride by EPA 300	05.25.2020	06.12.2020	JKR	CL	
661868-020	S	HA-3 (1.5-2)	05.15.2020 13:35	SW8015MOD_NM	TPH by SW8015 Mod	05.25.2020	05.29.2020 13:35	JKR	PHCC10C28 PHCC28C3	

Inter Office Shipment or Sample Comments:

Put DRO on hold. Added NM 8015 method and 32'd per Terracon ASD 05.28.20

Relinquished By:



Brenda Ward

Date Relinquished: 05.19.2020

Received By:



Jhyrom Edralin

Date Received: 05.20.2020

Cooler Temperature: 3.5



Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 63962

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : hiu-068

Sent By: Brenda Ward

Date Sent: 05.19.2020 04.58 PM

Received By: Jhyrom Edralin

Date Received: 05.20.2020 09.46 AM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	3.5
#2 *Shipping container in good condition?	Yes
#3 *Samples received with appropriate temperature?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 *Custody Seals Signed and dated for Containers/coolers	N/A
#6 *IOS present?	Yes
#7 Any missing/extra samples?	No
#8 IOS agrees with sample label(s)/matrix?	Yes
#9 Sample matrix/ properties agree with IOS?	Yes
#10 Samples in proper container/ bottle?	Yes
#11 Samples properly preserved?	Yes
#12 Sample container(s) intact?	Yes
#13 Sufficient sample amount for indicated test(s)?	Yes
#14 All samples received within hold time?	Yes

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

NonConformance:

Put DRO on hold. Added NM 8015 method and 32'd per Terracon ASD 05.28.20

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ Contacted by : _____ Date: _____

Checklist reviewed by:

Jhyrom Edralin

Date: 05.20.2020

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Terracon-Lubbock

Date/ Time Received: 05.18.2020 02.10.00 PM

Work Order #: 661868

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : IR-4

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1.9
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	Yes
#18 Water VOC samples have zero headspace?	N/A

TPH & CHLORIDES SENT TO STAFFORD

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

Analyst:

PH Device/Lot#:

Checklist completed by:


 Brenda Ward

Date: 05.18.2020

Checklist reviewed by:


 Jessica Kramer

Date: 05.19.2020



Certificate of Analysis Summary 661923

Terracon-Lubbock, Lubbock, TX

Project Name: Holstun 2nd line release

Project Id: AR207089
Contact: Joseph Guesnier
Project Location: Client: Spur

Date Received in Lab: Mon 05.18.2020 14:10
Report Date: 06.01.2020 14:12
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	661923-001	661923-002	661923-003	661923-004		
	Field Id:	HA-1 (5-5.6)	HA-2 (4-5-5)	SW - (3.5-4)	SW - (5-5-6)		
	Depth:	5.5-6 ft	4.5-5 ft	3.5-4 ft	5.5-6 ft		
	Matrix:	SOIL	SOIL	SOIL	SOIL		
	Sampled:	05.16.2020 12:30	05.16.2020 12:35	05.16.2020 12:40	05.16.2020 12:45		
BTEX by EPA 8021B	Extracted:	05.19.2020 14:00	05.19.2020 14:00	05.19.2020 14:00	05.19.2020 14:00		
	Analyzed:	05.20.2020 00:47	05.20.2020 01:14	05.20.2020 01:41	05.20.2020 02:07		
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Benzene		0.0932 0.0190	0.575 0.0182	0.240 0.0187	0.108 0.0192		
Toluene		0.160 0.0190	1.34 0.0182	0.777 0.0187	0.673 0.0192		
Ethylbenzene		0.0741 0.0190	0.809 0.0182	0.575 0.0187	0.771 0.0192		
m,p-Xylenes		0.135 0.0380	1.03 0.0364	0.762 0.0375	1.11 0.0385		
o-Xylene		0.0627 0.0190	0.418 0.0182	0.328 0.0187	0.379 0.0192		
Total Xylenes		0.198 0.0190	1.45 0.0182	1.09 0.0187	1.49 0.0192		
Total BTEX		0.525 0.0190	4.17 0.0182	2.68 0.0187	3.04 0.0192		
Chloride by EPA 300 SUB: T104704215-19-30	Extracted:	05.20.2020 16:52	05.20.2020 16:52	05.20.2020 16:52	05.20.2020 16:52		
	Analyzed:	05.20.2020 22:28	05.20.2020 22:39	05.20.2020 22:51	05.20.2020 23:03		
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Chloride		12400 99.2	27900 98.2	32000 101	28700 101		
TPH By SW8015 Mod SUB: T104704215-19-30	Extracted:	05.28.2020 12:45	05.28.2020 12:48	05.28.2020 12:51	05.28.2020 12:54		
	Analyzed:	05.29.2020 16:14	06.01.2020 11:12	05.29.2020 16:54	05.29.2020 17:14		
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Gasoline Range Hydrocarbons (GRO)		18.8 J 50.4	21.7 J 50.4	23.2 J 50.0	40.2 J 49.7		
Diesel Range Organics (DRO)		15.7 J 50.4	37.8 J 50.4	85.7 50.0	189 49.7		
Motor Oil Range Hydrocarbons (MRO)		11.2 J 50.4	<10.1 50.4	16.4 J 50.0	33.4 J 49.7		
Total TPH		45.7 J 50.4	59.5 50.4	125 50.0	263 49.7		

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Jessica Kramer
Project Manager



Analytical Report 661923

for

Terracon-Lubbock

Project Manager: Joseph Guesnier

Holstun 2nd line release

AR207089

06.01.2020

Collected By: Client



6701 Aberdeen, Suite 9 Lubbock, TX 79424

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-32), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-23), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-6)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



06.01.2020

Project Manager: **Joseph Guesnier**

Terracon-Lubbock

5827 50th st, Suite 1

Lubbock, TX 79424

Reference: XENCO Report No(s): **661923**

Holstun 2nd line release

Project Address: Client: Spur

Joseph Guesnier:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 661923. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 661923 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

A handwritten signature in black ink that reads 'Jessica Kramer'.

Jessica Kramer

Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

**Sample Cross Reference 661923****Terracon-Lubbock, Lubbock, TX**

Holstun 2nd line release

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
HA-1 (5-5.6)	S	05.16.2020 12:30	5.5 - 6 ft	661923-001
HA-2 (4-5-5)	S	05.16.2020 12:35	4.5 - 5 ft	661923-002
SW - (3.5-4)	S	05.16.2020 12:40	3.5 - 4 ft	661923-003
SW - (5-5-6)	S	05.16.2020 12:45	5.5 - 6 ft	661923-004

**CASE NARRATIVE****Client Name: Terracon-Lubbock****Project Name: Holstun 2nd line release**Project ID: AR207089
Work Order Number(s): 661923Report Date: 06.01.2020
Date Received: 05.18.2020

This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory.

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 661923

Terracon-Lubbock, Lubbock, TX

Holstun 2nd line release

Sample Id: **HA-1 (5-5.6)**

Matrix: Soil

Date Received: 05.18.2020 14:10

Lab Sample Id: 661923-001

Date Collected: 05.16.2020 12:30

Sample Depth: 5.5 - 6 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture:

Analyst: JYM

Date Prep: 05.20.2020 16:52

Basis: Wet Weight

Seq Number: 3126586

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	12400	99.2	3.51	mg/kg	05.20.2020 22:28		10

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DRU

% Moisture:

Analyst: ISU

Date Prep: 05.28.2020 12:45

Basis: Wet Weight

Seq Number: 3127457

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	18.8	50.4	10.1	mg/kg	05.29.2020 16:14	J	1
Diesel Range Organics (DRO)	C10C28DRO	15.7	50.4	10.1	mg/kg	05.29.2020 16:14	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	11.2	50.4	10.1	mg/kg	05.29.2020 16:14	J	1
Total TPH	PHC635	45.7	50.4	10.1	mg/kg	05.29.2020 16:14	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	05.29.2020 16:14	
o-Terphenyl	84-15-1	101	%	70-135	05.29.2020 16:14	



Certificate of Analytical Results 661923

Terracon-Lubbock, Lubbock, TX

Holstun 2nd line release

Sample Id: **HA-1 (5-5.6)**

Matrix: Soil

Date Received: 05.18.2020 14:10

Lab Sample Id: 661923-001

Date Collected: 05.16.2020 12:30

Sample Depth: 5.5 - 6 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 05.19.2020 14:00

Basis: Wet Weight

Seq Number: 3126469

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.0932	0.0190	0.00859	mg/kg	05.20.2020 00:47		1
Toluene	108-88-3	0.160	0.0190	0.00445	mg/kg	05.20.2020 00:47		1
Ethylbenzene	100-41-4	0.0741	0.0190	0.00586	mg/kg	05.20.2020 00:47		1
m,p-Xylenes	179601-23-1	0.135	0.0380	0.00648	mg/kg	05.20.2020 00:47		1
o-Xylene	95-47-6	0.0627	0.0190	0.00648	mg/kg	05.20.2020 00:47		1
Total Xylenes	1330-20-7	0.198	0.0190	0.00648	mg/kg	05.20.2020 00:47		1
Total BTEX		0.525	0.0190	0.00445	mg/kg	05.20.2020 00:47		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	113	%	68-120	05.20.2020 00:47			
a,a,a-Trifluorotoluene	98-08-8	102	%	71-121	05.20.2020 00:47			



Certificate of Analytical Results 661923

Terracon-Lubbock, Lubbock, TX

Holstun 2nd line release

Sample Id: HA-2 (4-5-5)

Matrix: Soil

Date Received: 05.18.2020 14:10

Lab Sample Id: 661923-002

Date Collected: 05.16.2020 12:35

Sample Depth: 4.5 - 5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture:

Analyst: JYM

Date Prep: 05.20.2020 16:52

Basis: Wet Weight

Seq Number: 3126586

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	27900	98.2	3.48	mg/kg	05.20.2020 22:39		10

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DRU

% Moisture:

Analyst: ISU

Date Prep: 05.28.2020 12:48

Basis: Wet Weight

Seq Number: 3127457

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	21.7	50.4	10.1	mg/kg	06.01.2020 11:12	J	1
Diesel Range Organics (DRO)	C10C28DRO	37.8	50.4	10.1	mg/kg	06.01.2020 11:12	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<10.1	50.4	10.1	mg/kg	06.01.2020 11:12	U	1
Total TPH	PHC635	59.5	50.4	10.1	mg/kg	06.01.2020 11:12		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	06.01.2020 11:12	
o-Terphenyl	84-15-1	110	%	70-135	06.01.2020 11:12	



Certificate of Analytical Results 661923

Terracon-Lubbock, Lubbock, TX

Holstun 2nd line release

Sample Id: **HA-2 (4-5-5)**

Matrix: Soil

Date Received: 05.18.2020 14:10

Lab Sample Id: 661923-002

Date Collected: 05.16.2020 12:35

Sample Depth: 4.5 - 5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 05.19.2020 14:00

Basis: Wet Weight

Seq Number: 3126469

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.575	0.0182	0.00822	mg/kg	05.20.2020 01:14		1
Toluene	108-88-3	1.34	0.0182	0.00425	mg/kg	05.20.2020 01:14		1
Ethylbenzene	100-41-4	0.809	0.0182	0.00560	mg/kg	05.20.2020 01:14		1
m,p-Xylenes	179601-23-1	1.03	0.0364	0.00620	mg/kg	05.20.2020 01:14		1
o-Xylene	95-47-6	0.418	0.0182	0.00620	mg/kg	05.20.2020 01:14		1
Total Xylenes	1330-20-7	1.45	0.0182	0.00620	mg/kg	05.20.2020 01:14		1
Total BTEX		4.17	0.0182	0.00425	mg/kg	05.20.2020 01:14		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	109	%	68-120	05.20.2020 01:14			
a,a,a-Trifluorotoluene	98-08-8	105	%	71-121	05.20.2020 01:14			



Certificate of Analytical Results 661923

Terracon-Lubbock, Lubbock, TX

Holstun 2nd line release

Sample Id: SW - (3.5-4)

Matrix: Soil

Date Received: 05.18.2020 14:10

Lab Sample Id: 661923-003

Date Collected: 05.16.2020 12:40

Sample Depth: 3.5 - 4 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture:

Analyst: JYM

Date Prep: 05.20.2020 16:52

Basis: Wet Weight

Seq Number: 3126586

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	32000	101	3.59	mg/kg	05.20.2020 22:51		10

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DRU

% Moisture:

Analyst: ISU

Date Prep: 05.28.2020 12:51

Basis: Wet Weight

Seq Number: 3127457

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	23.2	50.0	10.0	mg/kg	05.29.2020 16:54	J	1
Diesel Range Organics (DRO)	C10C28DRO	85.7	50.0	10.0	mg/kg	05.29.2020 16:54		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	16.4	50.0	10.0	mg/kg	05.29.2020 16:54	J	1
Total TPH	PHC635	125	50.0	10.0	mg/kg	05.29.2020 16:54		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	05.29.2020 16:54	
o-Terphenyl	84-15-1	113	%	70-135	05.29.2020 16:54	



Certificate of Analytical Results 661923

Terracon-Lubbock, Lubbock, TX

Holstun 2nd line release

Sample Id: SW - (3.5-4)

Matrix: Soil

Date Received: 05.18.2020 14:10

Lab Sample Id: 661923-003

Date Collected: 05.16.2020 12:40

Sample Depth: 3.5 - 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 05.19.2020 14:00

Basis: Wet Weight

Seq Number: 3126469

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.240	0.0187	0.00846	mg/kg	05.20.2020 01:41		1
Toluene	108-88-3	0.777	0.0187	0.00438	mg/kg	05.20.2020 01:41		1
Ethylbenzene	100-41-4	0.575	0.0187	0.00577	mg/kg	05.20.2020 01:41		1
m,p-Xylenes	179601-23-1	0.762	0.0375	0.00639	mg/kg	05.20.2020 01:41		1
o-Xylene	95-47-6	0.328	0.0187	0.00639	mg/kg	05.20.2020 01:41		1
Total Xylenes	1330-20-7	1.09	0.0187	0.00639	mg/kg	05.20.2020 01:41		1
Total BTEX		2.68	0.0187	0.00438	mg/kg	05.20.2020 01:41		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	111	%	68-120	05.20.2020 01:41			
a,a,a-Trifluorotoluene	98-08-8	110	%	71-121	05.20.2020 01:41			



Certificate of Analytical Results 661923

Terracon-Lubbock, Lubbock, TX

Holstun 2nd line release

Sample Id: SW - (5-5-6)

Matrix: Soil

Date Received: 05.18.2020 14:10

Lab Sample Id: 661923-004

Date Collected: 05.16.2020 12:45

Sample Depth: 5.5 - 6 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture:

Analyst: JYM

Date Prep: 05.20.2020 16:52

Basis: Wet Weight

Seq Number: 3126586

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	28700	101	3.57	mg/kg	05.20.2020 23:03		10

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech: DRU

% Moisture:

Analyst: ISU

Date Prep: 05.28.2020 12:54

Basis: Wet Weight

Seq Number: 3127457

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	40.2	49.7	9.94	mg/kg	05.29.2020 17:14	J	1
Diesel Range Organics (DRO)	C10C28DRO	189	49.7	9.94	mg/kg	05.29.2020 17:14		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	33.4	49.7	9.94	mg/kg	05.29.2020 17:14	J	1
Total TPH	PHC635	263	49.7	9.94	mg/kg	05.29.2020 17:14		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	05.29.2020 17:14	
o-Terphenyl	84-15-1	116	%	70-135	05.29.2020 17:14	



Certificate of Analytical Results 661923

Terracon-Lubbock, Lubbock, TX

Holstun 2nd line release

Sample Id: SW - (5-5-6)

Matrix: Soil

Date Received: 05.18.2020 14:10

Lab Sample Id: 661923-004

Date Collected: 05.16.2020 12:45

Sample Depth: 5.5 - 6 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 05.19.2020 14:00

Basis: Wet Weight

Seq Number: 3126469

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.108	0.0192	0.00869	mg/kg	05.20.2020 02:07		1
Toluene	108-88-3	0.673	0.0192	0.00450	mg/kg	05.20.2020 02:07		1
Ethylbenzene	100-41-4	0.771	0.0192	0.00592	mg/kg	05.20.2020 02:07		1
m,p-Xylenes	179601-23-1	1.11	0.0385	0.00656	mg/kg	05.20.2020 02:07		1
o-Xylene	95-47-6	0.379	0.0192	0.00656	mg/kg	05.20.2020 02:07		1
Total Xylenes	1330-20-7	1.49	0.0192	0.00656	mg/kg	05.20.2020 02:07		1
Total BTEX		3.04	0.0192	0.00450	mg/kg	05.20.2020 02:07		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	113	%	68-120	05.20.2020 02:07			
a,a,a-Trifluorotoluene	98-08-8	110	%	71-121	05.20.2020 02:07			



Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



Terracon-Lubbock

Holstun 2nd line release

Analytical Method: Chloride by EPA 300

Seq Number: 3126586

MB Sample Id: 7703771-1-BLK

Matrix: Solid

LCS Sample Id: 7703771-1-BKS

Prep Method: E300P

Date Prep: 05.20.2020

LCSD Sample Id: 7703771-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.354	100	100	100	101	101	80-120	1	20	mg/kg	05.20.2020 17:35	

Analytical Method: Chloride by EPA 300

Seq Number: 3126586

Parent Sample Id: 661868-001

Matrix: Soil

MS Sample Id: 661868-001 S

Prep Method: E300P

Date Prep: 05.20.2020

MSD Sample Id: 661868-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	12.5	99.8	108	96	109	97	80-120	1	20	mg/kg	05.20.2020 18:10	

Analytical Method: Chloride by EPA 300

Seq Number: 3126586

Parent Sample Id: 661868-020

Matrix: Soil

MS Sample Id: 661868-020 S

Prep Method: E300P

Date Prep: 05.20.2020

MSD Sample Id: 661868-020 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	109	100	206	97	205	96	80-120	0	20	mg/kg	05.20.2020 22:04	

Analytical Method: TPH By SW8015 Mod

Seq Number: 3127457

MB Sample Id: 7704261-1-BLK

Matrix: Solid

LCS Sample Id: 7704261-1-BKS

Prep Method: SW8015P

Date Prep: 05.28.2020

LCSD Sample Id: 7704261-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<10.0	1000	909	91	997	100	70-135	9	35	mg/kg	05.28.2020 18:14	
Diesel Range Organics (DRO)	<10.0	1000	1090	109	1070	107	70-135	2	35	mg/kg	05.28.2020 18:14	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	95		109		108		70-135	%	05.28.2020 18:14
o-Terphenyl	98		111		109		70-135	%	05.28.2020 18:14

Analytical Method: TPH By SW8015 Mod

Seq Number: 3127457

Matrix: Solid

MB Sample Id: 7704261-1-BLK

Prep Method: SW8015P

Date Prep: 05.28.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<10.0	mg/kg	05.28.2020 17:54	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Terracon-Lubbock

Holstun 2nd line release

Analytical Method: TPH By SW8015 Mod

Seq Number: 3127457

Parent Sample Id: 661901-003

Matrix: Soil

MS Sample Id: 661901-003 S

Prep Method: SW8015P

Date Prep: 05.28.2020

MSD Sample Id: 661901-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<10.0	1000	854	85	855	86	70-135	0	35	mg/kg	05.28.2020 19:34	
Diesel Range Organics (DRO)	15.5	1000	1010	99	997	98	70-135	1	35	mg/kg	05.28.2020 19:34	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	107		106		70-135	%	05.28.2020 19:34
o-Terphenyl	104		103		70-135	%	05.28.2020 19:34

Analytical Method: BTEX by EPA 8021B

Seq Number: 3126469

MB Sample Id: 7703666-1-BLK

Matrix: Solid

LCS Sample Id: 7703666-1-BKS

Prep Method: SW5035A

Date Prep: 05.19.2020

LCSD Sample Id: 7703666-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00904	2.00	2.01	101	1.99	100	55-120	1	20	mg/kg	05.19.2020 13:11	
Toluene	<0.00468	2.00	1.99	100	1.95	98	77-120	2	20	mg/kg	05.19.2020 13:11	
Ethylbenzene	<0.00616	2.00	1.99	100	1.97	99	77-120	1	20	mg/kg	05.19.2020 13:11	
m,p-Xylenes	<0.00682	4.00	3.96	99	3.91	98	78-120	1	20	mg/kg	05.19.2020 13:11	
o-Xylene	<0.00682	2.00	1.98	99	1.98	99	78-120	0	20	mg/kg	05.19.2020 13:11	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	107		100		98		68-120	%	05.19.2020 13:11
a,a,a-Trifluorotoluene	109		96		95		71-121	%	05.19.2020 13:11

Analytical Method: BTEX by EPA 8021B

Seq Number: 3126469

Parent Sample Id: 661868-001

Matrix: Soil

MS Sample Id: 661868-001 S

Prep Method: SW5035A

Date Prep: 05.19.2020

MSD Sample Id: 661868-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	0.113	1.80	1.83	95	2.01	97	54-120	9	25	mg/kg	05.19.2020 16:42	
Toluene	0.315	1.80	2.04	96	2.26	100	57-120	10	25	mg/kg	05.19.2020 16:42	
Ethylbenzene	0.0835	1.80	1.95	104	2.18	108	58-131	11	25	mg/kg	05.19.2020 16:42	
m,p-Xylenes	0.0621	3.60	3.81	104	4.26	108	62-124	11	25	mg/kg	05.19.2020 16:42	
o-Xylene	0.0194	1.80	1.89	104	2.11	107	62-124	11	25	mg/kg	05.19.2020 16:42	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	98		96		68-120	%	05.19.2020 16:42
a,a,a-Trifluorotoluene	94		95		71-121	%	05.19.2020 16:42

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec

661923

50th Street, Suite 1 ■ Lubbock, Texas 79424 ■ 806-300-0140
Responsive ■ Resourceful ■ Reliable

Inter-Office Shipment

IOS Number : **63914**

Date/Time: 05.19.2020

Created by: Brenda Ward

Please send report to: Jessica Kramer

Lab# From: **Lubbock**

Delivery Priority:

Address: 6701 Aberdeen, Suite 9 Lubbock, TX 79424

Lab# To: **Houston**

Air Bill No.: 770502983275

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
661923-001	S	HA-1 (5-5.6)	05.16.2020 12:30	E300_CL	Chloride by EPA 300	05.25.2020	06.13.2020	JKR	CL	
661923-001	S	HA-1 (5-5.6)	05.16.2020 12:30	SW8015DRO-ORO	TPH DRO-ORO by SW-846 8015	05.25.2020	05.30.2020	JKR	PHCD	
661923-002	S	HA-2 (4-5-5)	05.16.2020 12:35	E300_CL	Chloride by EPA 300	05.25.2020	06.13.2020	JKR	CL	
661923-002	S	HA-2 (4-5-5)	05.16.2020 12:35	SW8015DRO-ORO	TPH DRO-ORO by SW-846 8015	05.25.2020	05.30.2020	JKR	PHCD	
661923-003	S	SW - (3.5-4)	05.16.2020 12:40	SW8015DRO-ORO	TPH DRO-ORO by SW-846 8015	05.25.2020	05.30.2020	JKR	PHCD	
661923-003	S	SW - (3.5-4)	05.16.2020 12:40	E300_CL	Chloride by EPA 300	05.25.2020	06.13.2020	JKR	CL	
661923-004	S	SW - (5-5-6)	05.16.2020 12:45	SW8015DRO-ORO	TPH DRO-ORO by SW-846 8015	05.25.2020	05.30.2020	JKR	PHCD	
661923-004	S	SW - (5-5-6)	05.16.2020 12:45	E300_CL	Chloride by EPA 300	05.25.2020	06.13.2020	JKR	CL	

Inter Office Shipment or Sample Comments:

Relinquished By:



Brenda Ward

Date Relinquished: 05.19.2020

Received By:



Jhyrom Edralin

Date Received: 05.20.2020

Cooler Temperature: 3.5



Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 63914

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : hiu-068

Sent By: Brenda Ward

Date Sent: 05.19.2020 10.06 AM

Received By: Jhyrom Edralin

Date Received: 05.20.2020 09.46 AM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	3.5
#2 *Shipping container in good condition?	Yes
#3 *Samples received with appropriate temperature?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 *Custody Seals Signed and dated for Containers/coolers	N/A
#6 *IOS present?	Yes
#7 Any missing/extra samples?	No
#8 IOS agrees with sample label(s)/matrix?	Yes
#9 Sample matrix/ properties agree with IOS?	Yes
#10 Samples in proper container/ bottle?	Yes
#11 Samples properly preserved?	Yes
#12 Sample container(s) intact?	Yes
#13 Sufficient sample amount for indicated test(s)?	Yes
#14 All samples received within hold time?	Yes

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ Contacted by : _____ Date: _____

Checklist reviewed by:

Jhyrom Edralin

Date: 05.20.2020

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Terracon-Lubbock

Date/ Time Received: 05.18.2020 02.10.00 PM

Work Order #: 661923

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : IR-4

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1.9
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	Yes
#18 Water VOC samples have zero headspace?	N/A

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

Analyst:

PH Device/Lot#:

Checklist completed by:

Brenda Ward
Brenda Ward

Date: 05.19.2020

Checklist reviewed by:

Jessica Kramer
Jessica Kramer

Date: 05.19.2020

Certificate of Analysis Summary 671095



Terracon-Lubbock, Lubbock, TX

Project Name: Holstun 2nd Line Release

Project Id: AR207089
Contact: Joseph Guesnier
Project Location:

Date Received in Lab: Wed 08.26.2020 15:26
Report Date: 08.31.2020 17:16
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	671095-001	671095-002	671095-003	671095-004	671095-005	671095-006
	<i>Field Id:</i>	NW-(3.5-4)	SW-(3.5-4)	WW-(3.5-4)	EW-(3.5-4)	NF-(7.5-8)	SF-(7.5-8)
	<i>Depth:</i>	3.5-4	3.5-4	3.5-4	3.5-4	7.5-8	7.5-8
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	08.23.2020 12:00	08.23.2020 12:05	08.23.2020 12:10	08.23.2020 12:15	08.23.2020 12:20	08.23.2020 12:25
BTEX by EPA 8021B SUB: T104704400-20-21	<i>Extracted:</i>	08.28.2020 17:00	08.28.2020 17:00	08.28.2020 17:00	08.29.2020 14:30	08.28.2020 10:30	08.28.2020 10:30
	<i>Analyzed:</i>	08.29.2020 04:10	08.29.2020 13:54	08.29.2020 14:15	08.29.2020 17:37	08.28.2020 16:41	08.28.2020 17:15
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198	<0.00199 0.00199	<0.00201 0.00201
Toluene		<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198	<0.00199 0.00199	<0.00201 0.00201
Ethylbenzene		<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198	<0.00199 0.00199	<0.00201 0.00201
m,p-Xylenes		<0.00398 0.00398	<0.00399 0.00399	<0.00398 0.00398	<0.00397 0.00397	<0.00398 0.00398	<0.00402 0.00402
o-Xylene		<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198	<0.00199 0.00199	<0.00201 0.00201
Xylenes, Total		<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198	<0.00199 0.00199	<0.00201 0.00201
Total BTEX		<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198	<0.00199 0.00199	<0.00201 0.00201
Chloride by EPA 300 SUB: T104704400-20-21	<i>Extracted:</i>	08.27.2020 15:00	08.27.2020 15:00	08.27.2020 15:00	08.27.2020 15:00	08.27.2020 15:00	08.27.2020 15:00
	<i>Analyzed:</i>	08.27.2020 17:25	08.27.2020 17:31	08.27.2020 17:57	08.27.2020 18:03	08.27.2020 18:22	08.27.2020 18:28
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		1240 49.5	1550 49.9	953 49.5	460 5.05	264 25.3	262 24.8
TPH by SW8015 Mod SUB: T104704400-20-21	<i>Extracted:</i>	08.28.2020 12:00	08.28.2020 12:00	08.28.2020 12:00	08.28.2020 12:00	08.28.2020 12:00	08.28.2020 12:00
	<i>Analyzed:</i>	08.29.2020 02:16	08.29.2020 02:39	08.29.2020 03:03	08.29.2020 03:51	08.29.2020 04:14	08.29.2020 04:38
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<49.8 49.8	<50.0 50.0	<50.0 50.0	<49.9 49.9	<50.0 50.0	<50.0 50.0
Diesel Range Organics (DRO)		<49.8 49.8	<50.0 50.0	<50.0 50.0	<49.9 49.9	<50.0 50.0	<50.0 50.0
Motor Oil Range Hydrocarbons (MRO)		<49.8 49.8	<50.0 50.0	<50.0 50.0	<49.9 49.9	<50.0 50.0	<50.0 50.0
Total TPH		<49.8 49.8	<50.0 50.0	<50.0 50.0	<49.9 49.9	<50.0 50.0	<50.0 50.0

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Certificate of Analysis Summary 671095



Terracon-Lubbock, Lubbock, TX

Project Name: Holstun 2nd Line Release

Project Id: AR207089
Contact: Joseph Guesnier
Project Location:

Date Received in Lab: Wed 08.26.2020 15:26
Report Date: 08.31.2020 17:16
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	671095-007	671095-008				
	Field Id:	WF-(7.5-8)	EF-(7.5-8)				
	Depth:	7.5-8	7.5-8				
	Matrix:	SOIL	SOIL				
	Sampled:	08.23.2020 12:30	08.23.2020 12:35				
BTEX by EPA 8021B SUB: T104704400-20-21	Extracted:	08.28.2020 10:30	08.28.2020 10:30				
	Analyzed:	08.28.2020 17:36	08.28.2020 17:57				
	Units/RL:	mg/kg RL	mg/kg RL				
Benzene		<0.00200 0.00200	<0.00199 0.00199				
Toluene		<0.00200 0.00200	<0.00199 0.00199				
Ethylbenzene		<0.00200 0.00200	<0.00199 0.00199				
m,p-Xylenes		<0.00401 0.00401	<0.00398 0.00398				
o-Xylene		<0.00200 0.00200	<0.00199 0.00199				
Xylenes, Total		<0.00200 0.00200	<0.00199 0.00199				
Total BTEX		<0.00200 0.00200	<0.00199 0.00199				
Chloride by EPA 300 SUB: T104704400-20-21	Extracted:	08.27.2020 15:00	08.27.2020 15:30				
	Analyzed:	08.27.2020 18:34	08.27.2020 19:34				
	Units/RL:	mg/kg RL	mg/kg RL				
Chloride		501 50.4	192 5.00				
TPH by SW8015 Mod SUB: T104704400-20-21	Extracted:	08.28.2020 12:00	08.28.2020 12:00				
	Analyzed:	08.29.2020 05:01	08.29.2020 05:24				
	Units/RL:	mg/kg RL	mg/kg RL				
Gasoline Range Hydrocarbons (GRO)		<49.9 49.9	<50.0 50.0				
Diesel Range Organics (DRO)		82.5 49.9	<50.0 50.0				
Motor Oil Range Hydrocarbons (MRO)		<49.9 49.9	<50.0 50.0				
Total TPH		82.5 49.9	<50.0 50.0				

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Analytical Report 671095

for

Terracon-Lubbock

Project Manager: Joseph Guesnier

Holstun 2nd Line Release

AR207089

08.31.2020

Collected By: Client



6701 Aberdeen, Suite 9 Lubbock, TX 79424

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-37), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-23)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



08.31.2020

Project Manager: **Joseph Guesnier**

Terracon-Lubbock

5827 50th st, Suite 1

Lubbock, TX 79424

Reference: Eurofins Xenco, LLC Report No(s): **671095**

Holstun 2nd Line Release

Project Address:

Joseph Guesnier:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 671095. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 671095 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

A handwritten signature in black ink that reads "Jessica Kramer".

Jessica Kramer

Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

**Sample Cross Reference 671095****Terracon-Lubbock, Lubbock, TX**

Holstun 2nd Line Release

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
NW-(3.5-4)	S	08.23.2020 12:00	3.5 - 4	671095-001
SW-(3.5-4)	S	08.23.2020 12:05	3.5 - 4	671095-002
WW-(3.5-4)	S	08.23.2020 12:10	3.5 - 4	671095-003
EW-(3.5-4)	S	08.23.2020 12:15	3.5 - 4	671095-004
NF-(7.5-8)	S	08.23.2020 12:20	7.5 - 8	671095-005
SF-(7.5-8)	S	08.23.2020 12:25	7.5 - 8	671095-006
WF-(7.5-8)	S	08.23.2020 12:30	7.5 - 8	671095-007
EF-(7.5-8)	S	08.23.2020 12:35	7.5 - 8	671095-008

**CASE NARRATIVE****Client Name: Terracon-Lubbock****Project Name: Holstun 2nd Line Release**Project ID: AR207089
Work Order Number(s): 671095Report Date: 08.31.2020
Date Received: 08.26.2020**Sample receipt non conformances and comments:**

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3135899 BTEX by EPA 8021B

Lab Sample ID 671095-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Benzene, Ethylbenzene, Toluene, m,p-Xylenes , o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 671095-001, -002, -003.

The Laboratory Control Sample for Toluene, m,p-Xylenes , Benzene, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3135907 BTEX by EPA 8021B

Lab Sample ID 671095-004 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Benzene, Ethylbenzene, Toluene, m,p-Xylenes , o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 671095-004.

The Laboratory Control Sample for Toluene, m,p-Xylenes , Benzene, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.



Certificate of Analytical Results 671095

Terracon-Lubbock, Lubbock, TX

Holstun 2nd Line Release

Sample Id: **NW-(3.5-4)**

Matrix: Soil

Date Received: 08.26.2020 15:26

Lab Sample Id: 671095-001

Date Collected: 08.23.2020 12:00

Sample Depth: 3.5 - 4

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.27.2020 15:00

Basis: Wet Weight

Seq Number: 3135772

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1240	49.5	mg/kg	08.27.2020 17:25		10

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.28.2020 12:00

Basis: Wet Weight

Seq Number: 3135952

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	08.29.2020 02:16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	08.29.2020 02:16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	08.29.2020 02:16	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	08.29.2020 02:16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-130	08.29.2020 02:16	
o-Terphenyl	84-15-1	94	%	70-130	08.29.2020 02:16	



Certificate of Analytical Results 671095

Terracon-Lubbock, Lubbock, TX

Holstun 2nd Line Release

Sample Id: **NW-(3.5-4)**

Matrix: Soil

Date Received: 08.26.2020 15:26

Lab Sample Id: 671095-001

Date Collected: 08.23.2020 12:00

Sample Depth: 3.5 - 4

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: AMF

% Moisture:

Analyst: AMF

Date Prep: 08.28.2020 17:00

Basis: Wet Weight

Seq Number: 3135899

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.29.2020 04:10	UX	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.29.2020 04:10	UX	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.29.2020 04:10	UX	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.29.2020 04:10	UX	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.29.2020 04:10	UX	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	08.29.2020 04:10	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.29.2020 04:10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	70-130	08.29.2020 04:10	
1,4-Difluorobenzene	540-36-3	99	%	70-130	08.29.2020 04:10	



Certificate of Analytical Results 671095

Terracon-Lubbock, Lubbock, TX

Holstun 2nd Line Release

Sample Id: **SW-(3.5-4)** Matrix: Soil Date Received: 08.26.2020 15:26
 Lab Sample Id: 671095-002 Date Collected: 08.23.2020 12:05 Sample Depth: 3.5 - 4
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 08.27.2020 15:00 Basis: Wet Weight
 Seq Number: 3135772 SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1550	49.9	mg/kg	08.27.2020 17:31		10

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 08.28.2020 12:00 Basis: Wet Weight
 Seq Number: 3135952 SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.29.2020 02:39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.29.2020 02:39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.29.2020 02:39	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.29.2020 02:39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-130	08.29.2020 02:39	
o-Terphenyl	84-15-1	81	%	70-130	08.29.2020 02:39	



Certificate of Analytical Results 671095

Terracon-Lubbock, Lubbock, TX

Holstun 2nd Line Release

Sample Id: **SW-(3.5-4)**

Matrix: Soil

Date Received: 08.26.2020 15:26

Lab Sample Id: 671095-002

Date Collected: 08.23.2020 12:05

Sample Depth: 3.5 - 4

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: AMF

% Moisture:

Analyst: AMF

Date Prep: 08.28.2020 17:00

Basis: Wet Weight

Seq Number: 3135899

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.29.2020 13:54	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.29.2020 13:54	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.29.2020 13:54	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.29.2020 13:54	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.29.2020 13:54	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	08.29.2020 13:54	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.29.2020 13:54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	97	%	70-130	08.29.2020 13:54	
4-Bromofluorobenzene	460-00-4	110	%	70-130	08.29.2020 13:54	



Certificate of Analytical Results 671095

Terracon-Lubbock, Lubbock, TX

Holstun 2nd Line Release

Sample Id: **WW-(3.5-4)** Matrix: Soil Date Received: 08.26.2020 15:26
 Lab Sample Id: 671095-003 Date Collected: 08.23.2020 12:10 Sample Depth: 3.5 - 4
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 08.27.2020 15:00 Basis: Wet Weight
 Seq Number: 3135772 SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	953	49.5	mg/kg	08.27.2020 17:57		10

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 08.28.2020 12:00 Basis: Wet Weight
 Seq Number: 3135952 SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.29.2020 03:03	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.29.2020 03:03	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.29.2020 03:03	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.29.2020 03:03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	80	%	70-130	08.29.2020 03:03	
o-Terphenyl	84-15-1	83	%	70-130	08.29.2020 03:03	



Certificate of Analytical Results 671095

Terracon-Lubbock, Lubbock, TX

Holstun 2nd Line Release

Sample Id: **WW-(3.5-4)**

Matrix: Soil

Date Received: 08.26.2020 15:26

Lab Sample Id: 671095-003

Date Collected: 08.23.2020 12:10

Sample Depth: 3.5 - 4

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: AMF

% Moisture:

Analyst: AMF

Date Prep: 08.28.2020 17:00

Basis: Wet Weight

Seq Number: 3135899

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.29.2020 14:15	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.29.2020 14:15	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.29.2020 14:15	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.29.2020 14:15	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.29.2020 14:15	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	08.29.2020 14:15	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.29.2020 14:15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	98	%	70-130	08.29.2020 14:15	
4-Bromofluorobenzene	460-00-4	110	%	70-130	08.29.2020 14:15	



Certificate of Analytical Results 671095

Terracon-Lubbock, Lubbock, TX

Holstun 2nd Line Release

Sample Id: **EW-(3.5-4)**

Matrix: Soil

Date Received: 08.26.2020 15:26

Lab Sample Id: 671095-004

Date Collected: 08.23.2020 12:15

Sample Depth: 3.5 - 4

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.27.2020 15:00

Basis: Wet Weight

Seq Number: 3135772

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	460	5.05	mg/kg	08.27.2020 18:03		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.28.2020 12:00

Basis: Wet Weight

Seq Number: 3135952

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.29.2020 03:51	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.29.2020 03:51	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.29.2020 03:51	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.29.2020 03:51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-130	08.29.2020 03:51	
o-Terphenyl	84-15-1	95	%	70-130	08.29.2020 03:51	



Certificate of Analytical Results 671095

Terracon-Lubbock, Lubbock, TX

Holstun 2nd Line Release

Sample Id: **EW-(3.5-4)**

Matrix: Soil

Date Received: 08.26.2020 15:26

Lab Sample Id: 671095-004

Date Collected: 08.23.2020 12:15

Sample Depth: 3.5 - 4

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: AMF

% Moisture:

Analyst: AMF

Date Prep: 08.29.2020 14:30

Basis: Wet Weight

Seq Number: 3135907

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.29.2020 17:37	UX	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.29.2020 17:37	UX	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.29.2020 17:37	UX	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	08.29.2020 17:37	UX	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.29.2020 17:37	UX	1
Xylenes, Total	1330-20-7	<0.00198	0.00198	mg/kg	08.29.2020 17:37	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.29.2020 17:37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	70-130	08.29.2020 17:37	
1,4-Difluorobenzene	540-36-3	102	%	70-130	08.29.2020 17:37	



Certificate of Analytical Results 671095

Terracon-Lubbock, Lubbock, TX

Holstun 2nd Line Release

Sample Id: **NF-(7.5-8)** Matrix: Soil Date Received: 08.26.2020 15:26
 Lab Sample Id: 671095-005 Date Collected: 08.23.2020 12:20 Sample Depth: 7.5 - 8
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 08.27.2020 15:00 Basis: Wet Weight
 Seq Number: 3135772 SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	264	25.3	mg/kg	08.27.2020 18:22		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 08.28.2020 12:00 Basis: Wet Weight
 Seq Number: 3135952 SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.29.2020 04:14	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.29.2020 04:14	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.29.2020 04:14	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.29.2020 04:14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-130	08.29.2020 04:14	
o-Terphenyl	84-15-1	105	%	70-130	08.29.2020 04:14	



Certificate of Analytical Results 671095

Terracon-Lubbock, Lubbock, TX

Holstun 2nd Line Release

Sample Id: **NF-(7.5-8)**

Matrix: Soil

Date Received: 08.26.2020 15:26

Lab Sample Id: 671095-005

Date Collected: 08.23.2020 12:20

Sample Depth: 7.5 - 8

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: AMF

% Moisture:

Analyst: AMF

Date Prep: 08.28.2020 10:30

Basis: Wet Weight

Seq Number: 3135896

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.28.2020 16:41	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.28.2020 16:41	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.28.2020 16:41	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.28.2020 16:41	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.28.2020 16:41	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	08.28.2020 16:41	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.28.2020 16:41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	70-130	08.28.2020 16:41	
1,4-Difluorobenzene	540-36-3	98	%	70-130	08.28.2020 16:41	



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Terracon-Lubbock, Lubbock, TX

Holstun 2nd Line Release

Sample Id: **SF-(7.5-8)** Matrix: Soil Date Received: 08.26.2020 15:26
 Lab Sample Id: 671095-006 Date Collected: 08.23.2020 12:25 Sample Depth: 7.5 - 8
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 08.27.2020 15:00 Basis: Wet Weight
 Seq Number: 3135772 SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	262	24.8	mg/kg	08.27.2020 18:28		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 08.28.2020 12:00 Basis: Wet Weight
 Seq Number: 3135952 SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.29.2020 04:38	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.29.2020 04:38	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.29.2020 04:38	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.29.2020 04:38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-130	08.29.2020 04:38	
o-Terphenyl	84-15-1	101	%	70-130	08.29.2020 04:38	



Certificate of Analytical Results 671095

Terracon-Lubbock, Lubbock, TX

Holstun 2nd Line Release

Sample Id: **SF-(7.5-8)**

Matrix: Soil

Date Received: 08.26.2020 15:26

Lab Sample Id: 671095-006

Date Collected: 08.23.2020 12:25

Sample Depth: 7.5 - 8

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: AMF

% Moisture:

Analyst: AMF

Date Prep: 08.28.2020 10:30

Basis: Wet Weight

Seq Number: 3135896

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.28.2020 17:15	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.28.2020 17:15	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.28.2020 17:15	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.28.2020 17:15	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.28.2020 17:15	U	1
Xylenes, Total	1330-20-7	<0.00201	0.00201	mg/kg	08.28.2020 17:15	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.28.2020 17:15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	98	%	70-130	08.28.2020 17:15	
4-Bromofluorobenzene	460-00-4	89	%	70-130	08.28.2020 17:15	



Certificate of Analytical Results 671095

Terracon-Lubbock, Lubbock, TX

Holstun 2nd Line Release

Sample Id: **WF-(7.5-8)** Matrix: Soil Date Received: 08.26.2020 15:26
 Lab Sample Id: 671095-007 Date Collected: 08.23.2020 12:30 Sample Depth: 7.5 - 8
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 08.27.2020 15:00 Basis: Wet Weight
 Seq Number: 3135772 SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	501	50.4	mg/kg	08.27.2020 18:34		10

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 08.28.2020 12:00 Basis: Wet Weight
 Seq Number: 3135952 SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.29.2020 05:01	U	1
Diesel Range Organics (DRO)	C10C28DRO	82.5	49.9	mg/kg	08.29.2020 05:01		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.29.2020 05:01	U	1
Total TPH	PHC635	82.5	49.9	mg/kg	08.29.2020 05:01		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-130	08.29.2020 05:01	
o-Terphenyl	84-15-1	91	%	70-130	08.29.2020 05:01	



Certificate of Analytical Results 671095

Terracon-Lubbock, Lubbock, TX

Holstun 2nd Line Release

Sample Id: **WF-(7.5-8)**

Matrix: Soil

Date Received: 08.26.2020 15:26

Lab Sample Id: 671095-007

Date Collected: 08.23.2020 12:30

Sample Depth: 7.5 - 8

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: AMF

% Moisture:

Analyst: AMF

Date Prep: 08.28.2020 10:30

Basis: Wet Weight

Seq Number: 3135896

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.28.2020 17:36	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.28.2020 17:36	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.28.2020 17:36	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.28.2020 17:36	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.28.2020 17:36	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	08.28.2020 17:36	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.28.2020 17:36	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	103	%	70-130	08.28.2020 17:36		
1,4-Difluorobenzene	540-36-3	105	%	70-130	08.28.2020 17:36		



Certificate of Analytical Results 671095

Terracon-Lubbock, Lubbock, TX

Holstun 2nd Line Release

Sample Id: **EF-(7.5-8)** Matrix: Soil Date Received: 08.26.2020 15:26
 Lab Sample Id: 671095-008 Date Collected: 08.23.2020 12:35 Sample Depth: 7.5 - 8
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 08.27.2020 15:30 Basis: Wet Weight
 Seq Number: 3135774 SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	192	5.00	mg/kg	08.27.2020 19:34		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 08.28.2020 12:00 Basis: Wet Weight
 Seq Number: 3135952 SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.29.2020 05:24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.29.2020 05:24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.29.2020 05:24	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.29.2020 05:24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	124	%	70-130	08.29.2020 05:24	
o-Terphenyl	84-15-1	107	%	70-130	08.29.2020 05:24	



Certificate of Analytical Results 671095

Terracon-Lubbock, Lubbock, TX

Holstun 2nd Line Release

Sample Id: **EF-(7.5-8)**

Matrix: Soil

Date Received: 08.26.2020 15:26

Lab Sample Id: 671095-008

Date Collected: 08.23.2020 12:35

Sample Depth: 7.5 - 8

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: AMF

% Moisture:

Analyst: AMF

Date Prep: 08.28.2020 10:30

Basis: Wet Weight

Seq Number: 3135896

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.28.2020 17:57	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.28.2020 17:57	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.28.2020 17:57	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.28.2020 17:57	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.28.2020 17:57	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	08.28.2020 17:57	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.28.2020 17:57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	08.28.2020 17:57	
4-Bromofluorobenzene	460-00-4	103	%	70-130	08.28.2020 17:57	

Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



Terracon-Lubbock

Holstun 2nd Line Release

Analytical Method: Chloride by EPA 300

Seq Number: 3135772

MB Sample Id: 7710305-1-BLK

Matrix: Solid

LCS Sample Id: 7710305-1-BKS

Prep Method: E300P

Date Prep: 08.27.2020

LCSD Sample Id: 7710305-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	251	100	249	100	90-110	1	20	mg/kg	08.27.2020 15:57	

Analytical Method: Chloride by EPA 300

Seq Number: 3135774

MB Sample Id: 7710306-1-BLK

Matrix: Solid

LCS Sample Id: 7710306-1-BKS

Prep Method: E300P

Date Prep: 08.27.2020

LCSD Sample Id: 7710306-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	252	101	253	101	90-110	0	20	mg/kg	08.27.2020 19:24	

Analytical Method: Chloride by EPA 300

Seq Number: 3135772

Parent Sample Id: 671097-001

Matrix: Soil

MS Sample Id: 671097-001 S

Prep Method: E300P

Date Prep: 08.27.2020

MSD Sample Id: 671097-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	489	248	724	95	724	95	90-110	0	20	mg/kg	08.27.2020 16:16	

Analytical Method: Chloride by EPA 300

Seq Number: 3135772

Parent Sample Id: 671138-002

Matrix: Soil

MS Sample Id: 671138-002 S

Prep Method: E300P

Date Prep: 08.27.2020

MSD Sample Id: 671138-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	327	252	577	99	579	100	90-110	0	20	mg/kg	08.27.2020 17:44	

Analytical Method: Chloride by EPA 300

Seq Number: 3135774

Parent Sample Id: 671062-001

Matrix: Soil

MS Sample Id: 671062-001 S

Prep Method: E300P

Date Prep: 08.27.2020

MSD Sample Id: 671062-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1700	1240	3090	112	3070	110	90-110	1	20	mg/kg	08.27.2020 20:53	X

Analytical Method: Chloride by EPA 300

Seq Number: 3135774

Parent Sample Id: 671095-008

Matrix: Soil

MS Sample Id: 671095-008 S

Prep Method: E300P

Date Prep: 08.27.2020

MSD Sample Id: 671095-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	192	250	458	106	459	107	90-110	0	20	mg/kg	08.27.2020 19:39	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Terracon-Lubbock

Holstun 2nd Line Release

Analytical Method: TPH by SW8015 Mod

Seq Number: 3135952

MB Sample Id: 7710463-1-BLK

Matrix: Solid

LCS Sample Id: 7710463-1-BKS

Prep Method: SW8015P

Date Prep: 08.28.2020

LCSD Sample Id: 7710463-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	857	86	835	84	70-130	3	20	mg/kg	08.28.2020 21:51	
Diesel Range Organics (DRO)	<50.0	1000	859	86	889	89	70-130	3	20	mg/kg	08.28.2020 21:51	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	85		78		87		70-130	%	08.28.2020 21:51
o-Terphenyl	80		75		84		70-130	%	08.28.2020 21:51

Analytical Method: TPH by SW8015 Mod

Seq Number: 3135952

Matrix: Solid

Prep Method: SW8015P

Date Prep: 08.28.2020

MB Sample Id: 7710463-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	08.28.2020 21:24	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3135952

Matrix: Soil

Prep Method: SW8015P

Date Prep: 08.28.2020

Parent Sample Id: 670839-002

MS Sample Id: 670839-002 S

MSD Sample Id: 670839-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.8	996	852	86	1170	117	70-130	31	20	mg/kg	08.28.2020 23:06	F
Diesel Range Organics (DRO)	<49.8	996	894	90	1420	142	70-130	45	20	mg/kg	08.28.2020 23:06	XF

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	86		126		70-130	%	08.28.2020 23:06
o-Terphenyl	86		108		70-130	%	08.28.2020 23:06

Analytical Method: BTEX by EPA 8021B

Seq Number: 3135896

Matrix: Solid

Prep Method: SW5035A

Date Prep: 08.28.2020

MB Sample Id: 7710430-1-BLK

LCS Sample Id: 7710430-1-BKS

LCSD Sample Id: 7710430-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0976	98	0.0929	93	70-130	5	35	mg/kg	08.28.2020 14:10	
Toluene	<0.00200	0.100	0.0862	86	0.0819	82	70-130	5	35	mg/kg	08.28.2020 14:10	
Ethylbenzene	<0.00200	0.100	0.0869	87	0.0824	82	70-130	5	35	mg/kg	08.28.2020 14:10	
m,p-Xylenes	<0.00400	0.200	0.170	85	0.161	81	70-130	5	35	mg/kg	08.28.2020 14:10	
o-Xylene	<0.00200	0.100	0.0847	85	0.0808	81	70-130	5	35	mg/kg	08.28.2020 14:10	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	97		101		101		70-130	%	08.28.2020 14:10
4-Bromofluorobenzene	86		96		94		70-130	%	08.28.2020 14:10

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



Terracon-Lubbock

Holstun 2nd Line Release

Analytical Method: BTEX by EPA 8021B

Seq Number: 3135899

Matrix: Solid

Prep Method: SW5035A

Date Prep: 08.28.2020

MB Sample Id: 7710441-1-BLK

LCS Sample Id: 7710441-1-BKS

LCSD Sample Id: 7710441-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0936	94	0.0988	99	70-130	5	35	mg/kg	08.29.2020 01:47	
Toluene	<0.00200	0.100	0.0891	89	0.0947	95	70-130	6	35	mg/kg	08.29.2020 01:47	
Ethylbenzene	<0.00200	0.100	0.0899	90	0.0960	96	70-130	7	35	mg/kg	08.29.2020 01:47	
m,p-Xylenes	<0.00400	0.200	0.176	88	0.189	95	70-130	7	35	mg/kg	08.29.2020 01:47	
o-Xylene	<0.00200	0.100	0.0868	87	0.0930	93	70-130	7	35	mg/kg	08.29.2020 01:47	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	95		97		98		70-130	%	08.29.2020 01:47
4-Bromofluorobenzene	103		101		101		70-130	%	08.29.2020 01:47

Analytical Method: BTEX by EPA 8021B

Seq Number: 3135907

Matrix: Solid

Prep Method: SW5035A

Date Prep: 08.29.2020

MB Sample Id: 7710446-1-BLK

LCS Sample Id: 7710446-1-BKS

LCSD Sample Id: 7710446-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.102	102	0.100	100	70-130	2	35	mg/kg	08.29.2020 15:01	
Toluene	<0.00200	0.100	0.0887	89	0.0920	92	70-130	4	35	mg/kg	08.29.2020 15:01	
Ethylbenzene	<0.00200	0.100	0.0881	88	0.0951	95	70-130	8	35	mg/kg	08.29.2020 15:01	
m,p-Xylenes	<0.00400	0.200	0.172	86	0.190	95	70-130	10	35	mg/kg	08.29.2020 15:01	
o-Xylene	<0.00200	0.100	0.0862	86	0.0947	95	70-130	9	35	mg/kg	08.29.2020 15:01	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		102		100		70-130	%	08.29.2020 15:01
4-Bromofluorobenzene	88		96		109		70-130	%	08.29.2020 15:01

Analytical Method: BTEX by EPA 8021B

Seq Number: 3135899

Matrix: Soil

Prep Method: SW5035A

Date Prep: 08.28.2020

Parent Sample Id: 671095-001

MS Sample Id: 671095-001 S

MSD Sample Id: 671095-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.0605	61	0.0582	59	70-130	4	35	mg/kg	08.29.2020 02:28	X
Toluene	<0.00200	0.0998	0.0575	58	0.0551	56	70-130	4	35	mg/kg	08.29.2020 02:28	X
Ethylbenzene	<0.00200	0.0998	0.0551	55	0.0542	55	70-130	2	35	mg/kg	08.29.2020 02:28	X
m,p-Xylenes	<0.00399	0.200	0.112	56	0.112	57	70-130	0	35	mg/kg	08.29.2020 02:28	X
o-Xylene	<0.00200	0.0998	0.0571	57	0.0566	57	70-130	1	35	mg/kg	08.29.2020 02:28	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		97		70-130	%	08.29.2020 02:28
4-Bromofluorobenzene	105		107		70-130	%	08.29.2020 02:28

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec

Terracon-Lubbock

Holstun 2nd Line Release

Analytical Method: BTEX by EPA 8021B

Seq Number: 3135907

Parent Sample Id: 671095-004

Matrix: Soil

MS Sample Id: 671095-004 S

Prep Method: SW5035A

Date Prep: 08.29.2020

MSD Sample Id: 671095-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.0577	58	0.0603	61	70-130	4	35	mg/kg	08.29.2020 15:43	X
Toluene	<0.00200	0.0998	0.0514	52	0.0551	55	70-130	7	35	mg/kg	08.29.2020 15:43	X
Ethylbenzene	<0.00200	0.0998	0.0502	50	0.0551	55	70-130	9	35	mg/kg	08.29.2020 15:43	X
m,p-Xylenes	<0.00399	0.200	0.103	52	0.111	56	70-130	7	35	mg/kg	08.29.2020 15:43	X
o-Xylene	<0.00200	0.0998	0.0532	53	0.0576	58	70-130	8	35	mg/kg	08.29.2020 15:43	X

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		102		70-130	%	08.29.2020 15:43
4-Bromofluorobenzene	107		112		70-130	%	08.29.2020 15:43

Analytical Method: BTEX by EPA 8021B

Seq Number: 3135896

Parent Sample Id: 671103-003

Matrix: Soil

MS Sample Id: 671103-003 S

Prep Method: SW5035A

Date Prep: 08.28.2020

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.0733	73	70-130	mg/kg	08.28.2020 14:52	
Toluene	<0.00200	0.0998	0.0531	53	70-130	mg/kg	08.28.2020 14:52	X
Ethylbenzene	<0.00200	0.0998	0.0405	41	70-130	mg/kg	08.28.2020 14:52	X
m,p-Xylenes	<0.00399	0.200	0.0778	39	70-130	mg/kg	08.28.2020 14:52	X
o-Xylene	<0.00200	0.0998	0.0400	40	70-130	mg/kg	08.28.2020 14:52	X

Surrogate

	MS %Rec	MS Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		70-130	%	08.28.2020 14:52
4-Bromofluorobenzene	98		70-130	%	08.28.2020 14:52

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec

671095

[illegible]

Inter-Office Shipment

IOS Number : **69467**

Date/Time: 08.26.2020

Created by: Michael J Turner

Please send report to: Jessica Kramer

Lab# From: **Lubbock**

Delivery Priority:

Address: 6701 Aberdeen, Suite 9 Lubbock, TX 79424

Lab# To: **Midland**

Air Bill No.: 771369679724

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
671095-001	S	NW-(3.5-4)	08.23.2020 12:00	SW8015MOD_NM	TPH by SW8015 Mod	09.01.2020	09.06.2020	JKR	PHCC10C28 PHCC28C35	
671095-001	S	NW-(3.5-4)	08.23.2020 12:00	E300_CL	Chloride by EPA 300	09.01.2020	09.20.2020	JKR	CL	
671095-001	S	NW-(3.5-4)	08.23.2020 12:00	SW8021B	BTEX by EPA 8021B	09.01.2020	09.06.2020	JKR	BR4FBZ BZ BZME EBZ	
671095-002	S	SW-(3.5-4)	08.23.2020 12:05	SW8015MOD_NM	TPH by SW8015 Mod	09.01.2020	09.06.2020	JKR	PHCC10C28 PHCC28C35	
671095-002	S	SW-(3.5-4)	08.23.2020 12:05	SW8021B	BTEX by EPA 8021B	09.01.2020	09.06.2020	JKR	BR4FBZ BZ BZME EBZ	
671095-002	S	SW-(3.5-4)	08.23.2020 12:05	E300_CL	Chloride by EPA 300	09.01.2020	09.20.2020	JKR	CL	
671095-003	S	WW-(3.5-4)	08.23.2020 12:10	SW8021B	BTEX by EPA 8021B	09.01.2020	09.06.2020	JKR	BR4FBZ BZ BZME EBZ	
671095-003	S	WW-(3.5-4)	08.23.2020 12:10	SW8015MOD_NM	TPH by SW8015 Mod	09.01.2020	09.06.2020	JKR	PHCC10C28 PHCC28C35	
671095-003	S	WW-(3.5-4)	08.23.2020 12:10	E300_CL	Chloride by EPA 300	09.01.2020	09.20.2020	JKR	CL	
671095-004	S	EW-(3.5-4)	08.23.2020 12:15	SW8021B	BTEX by EPA 8021B	09.01.2020	09.06.2020	JKR	BR4FBZ BZ BZME EBZ	
671095-004	S	EW-(3.5-4)	08.23.2020 12:15	SW8015MOD_NM	TPH by SW8015 Mod	09.01.2020	09.06.2020	JKR	PHCC10C28 PHCC28C35	
671095-004	S	EW-(3.5-4)	08.23.2020 12:15	E300_CL	Chloride by EPA 300	09.01.2020	09.20.2020	JKR	CL	
671095-005	S	NF-(7.5-8)	08.23.2020 12:20	SW8021B	BTEX by EPA 8021B	09.01.2020	09.06.2020	JKR	BR4FBZ BZ BZME EBZ	
671095-005	S	NF-(7.5-8)	08.23.2020 12:20	SW8015MOD_NM	TPH by SW8015 Mod	09.01.2020	09.06.2020	JKR	PHCC10C28 PHCC28C35	
671095-005	S	NF-(7.5-8)	08.23.2020 12:20	E300_CL	Chloride by EPA 300	09.01.2020	09.20.2020	JKR	CL	
671095-006	S	SF-(7.5-8)	08.23.2020 12:25	SW8015MOD_NM	TPH by SW8015 Mod	09.01.2020	09.06.2020	JKR	PHCC10C28 PHCC28C35	
671095-006	S	SF-(7.5-8)	08.23.2020 12:25	SW8021B	BTEX by EPA 8021B	09.01.2020	09.06.2020	JKR	BR4FBZ BZ BZME EBZ	
671095-006	S	SF-(7.5-8)	08.23.2020 12:25	E300_CL	Chloride by EPA 300	09.01.2020	09.20.2020	JKR	CL	
671095-007	S	WF-(7.5-8)	08.23.2020 12:30	E300_CL	Chloride by EPA 300	09.01.2020	09.20.2020	JKR	CL	
671095-007	S	WF-(7.5-8)	08.23.2020 12:30	SW8021B	BTEX by EPA 8021B	09.01.2020	09.06.2020	JKR	BR4FBZ BZ BZME EBZ	
671095-007	S	WF-(7.5-8)	08.23.2020 12:30	SW8015MOD_NM	TPH by SW8015 Mod	09.01.2020	09.06.2020	JKR	PHCC10C28 PHCC28C35	
671095-008	S	EF-(7.5-8)	08.23.2020 12:35	SW8021B	BTEX by EPA 8021B	09.01.2020	09.06.2020	JKR	BR4FBZ BZ BZME EBZ	
671095-008	S	EF-(7.5-8)	08.23.2020 12:35	E300_CL	Chloride by EPA 300	09.01.2020	09.20.2020	JKR	CL	
671095-008	S	EF-(7.5-8)	08.23.2020 12:35	SW8015MOD_NM	TPH by SW8015 Mod	09.01.2020	09.06.2020	JKR	PHCC10C28 PHCC28C35	

Inter-Office Shipment

IOS Number : **69467**

Date/Time: 08.26.2020 Created by: Michael J Turner
Lab# From: **Lubbock** Delivery Priority:
Lab# To: **Midland** Air Bill No.: 771369679724

Please send report to: Jessica Kramer
Address: 6701 Aberdeen, Suite 9 Lubbock, TX 79424
E-Mail: jessica.kramer@xenco.com

Inter Office Shipment or Sample Comments:

Relinquished By:



Michael J Turner

Date Relinquished: 08.26.2020

Received By:



Brianna Teel

Date Received: 08.27.2020

Cooler Temperature: 0.5



Xenco

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 69467

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : IR-8

Sent By: Michael J Turner

Date Sent: 08.26.2020 04.09 PM

Received By: Brianna Teel

Date Received: 08.27.2020 10.46 AM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	.5
#2 *Shipping container in good condition?	Yes
#3 *Samples received with appropriate temperature?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 *Custody Seals Signed and dated for Containers/coolers	Yes
#6 *IOS present?	Yes
#7 Any missing/extra samples?	No
#8 IOS agrees with sample label(s)/matrix?	Yes
#9 Sample matrix/ properties agree with IOS?	Yes
#10 Samples in proper container/ bottle?	Yes
#11 Samples properly preserved?	Yes
#12 Sample container(s) intact?	Yes
#13 Sufficient sample amount for indicated test(s)?	Yes
#14 All samples received within hold time?	Yes

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ Contacted by : _____ Date: _____

Checklist reviewed by:

Brianna Teel

Date: 08.27.2020

Certificate of Analysis Summary 680935

Terracon-Lubbock, Lubbock, TX

Project Name: Holstun Line Release

Project Id: AR207089
 Contact: Joseph Guesnier
 Project Location:

Date Received in Lab: Fri 12.11.2020 16:45
 Report Date: 12.16.2020 16:39
 Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	680935-001	680935-002	680935-003			
	Field Id:	NW.1 - (3.5-4)	SW.1 - (3.5-4)	WW.1 - (3.5-4)			
	Depth:	3.5-4 ft	3.5-4 ft	3.5-4 ft			
	Matrix:	SOIL	SOIL	SOIL			
	Sampled:	12.10.2020 14:00	12.10.2020 14:05	12.10.2020 14:10			
BTEX by EPA 8021B SUB: T104704400-20-21	Extracted:	12.15.2020 12:30	12.15.2020 10:00	12.15.2020 10:00			
	Analyzed:	12.15.2020 16:25	12.16.2020 01:16	12.15.2020 19:38			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
Benzene		<0.00198 0.00198	0.00209 0.00200	<0.00200 0.00200			
Toluene		0.0120 0.00198	0.0230 0.00200	0.0144 0.00200			
Ethylbenzene		0.0108 0.00198	0.0178 0.00200	0.0132 0.00200			
m,p-Xylenes		0.0462 0.00396	0.0794 0.00399	0.0607 0.00399			
o-Xylene		0.0117 0.00198	0.0235 0.00200	0.0183 0.00200			
Xylenes, Total		0.0579 0.00198	0.103 0.00200	0.0790 0.00200			
Total BTEX		0.0807 0.00198	0.146 0.00200	0.107 0.00200			
Chloride by EPA 300 SUB: T104704400-20-21	Extracted:	12.15.2020 17:05	12.15.2020 17:05	12.15.2020 17:05			
	Analyzed:	12.15.2020 22:43	12.15.2020 22:59	12.15.2020 23:04			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
Chloride		359 24.8	344 25.0	346 24.9			
TPH by SW8015 Mod SUB: T104704400-20-21	Extracted:	12.15.2020 16:00	12.15.2020 16:00	12.15.2020 16:00			
	Analyzed:	12.16.2020 03:53	12.16.2020 04:15	12.16.2020 04:37			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<50.0 50.0	<49.9 49.9			
Diesel Range Organics (DRO)		<50.0 50.0	<50.0 50.0	<49.9 49.9			
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<50.0 50.0	<49.9 49.9			
Total TPH		<50.0 50.0	<50.0 50.0	<49.9 49.9			

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



Analytical Report 680935

for

Terracon-Lubbock

Project Manager: Joseph Guesnier

Holstun Line Release

AR207089

12.16.2020

Collected By: Client



6701 Aberdeen, Suite 9 Lubbock, TX 79424

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-23)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



12.16.2020

Project Manager: **Joseph Guesnier**

Terracon-Lubbock

5827 50th st, Suite 1

Lubbock, TX 79424

Reference: Eurofins Xenco, LLC Report No(s): **680935**

Holstun Line Release

Project Address:

Joseph Guesnier:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 680935. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 680935 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

A handwritten signature in black ink that reads "Jessica Kramer".

Jessica Kramer

Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

**Sample Cross Reference 680935****Terracon-Lubbock, Lubbock, TX**

Holstun Line Release

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
NW.1 - (3.5-4)	S	12.10.2020 14:00	3.5 - 4 ft	680935-001
SW.1 - (3.5-4)	S	12.10.2020 14:05	3.5 - 4 ft	680935-002
WW.1 - (3.5-4)	S	12.10.2020 14:10	3.5 - 4 ft	680935-003



CASE NARRATIVE

Client Name: Terracon-Lubbock

Project Name: Holstun Line Release

Project ID: AR207089
Work Order Number(s): 680935

Report Date: 12.16.2020
Date Received: 12.11.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3144975 BTEX by EPA 8021B

Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected.

Samples affected are: 680977-001 S, 680977-001 SD.



Certificate of Analytical Results 680935

Terracon-Lubbock, Lubbock, TX

Holstun Line Release

Sample Id: **NW.1 - (3.5-4)**

Matrix: Soil

Date Received: 12.11.2020 16:45

Lab Sample Id: 680935-001

Date Collected: 12.10.2020 14:00

Sample Depth: 3.5 - 4 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 12.15.2020 17:05

% Moisture:

Basis: Wet Weight

Seq Number: 3145041

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	359	24.8	mg/kg	12.15.2020 22:43		5

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 12.15.2020 16:00

% Moisture:

Basis: Wet Weight

Seq Number: 3145078

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.16.2020 03:53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.16.2020 03:53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.16.2020 03:53	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	12.16.2020 03:53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-130	12.16.2020 03:53	
o-Terphenyl	84-15-1	95	%	70-130	12.16.2020 03:53	



Certificate of Analytical Results 680935

Terracon-Lubbock, Lubbock, TX

Holstun Line Release

Sample Id: **NW.1 - (3.5-4)**

Matrix: Soil

Date Received: 12.11.2020 16:45

Lab Sample Id: 680935-001

Date Collected: 12.10.2020 14:00

Sample Depth: 3.5 - 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 12.15.2020 12:30

% Moisture:

Seq Number: 3144975

Basis: Wet Weight

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	12.15.2020 16:25	U	1
Toluene	108-88-3	0.0120	0.00198	mg/kg	12.15.2020 16:25		1
Ethylbenzene	100-41-4	0.0108	0.00198	mg/kg	12.15.2020 16:25		1
m,p-Xylenes	179601-23-1	0.0462	0.00396	mg/kg	12.15.2020 16:25		1
o-Xylene	95-47-6	0.0117	0.00198	mg/kg	12.15.2020 16:25		1
Xylenes, Total	1330-20-7	0.0579	0.00198	mg/kg	12.15.2020 16:25		1
Total BTEX		0.0807	0.00198	mg/kg	12.15.2020 16:25		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	12.15.2020 16:25	
4-Bromofluorobenzene	460-00-4	105	%	70-130	12.15.2020 16:25	



Certificate of Analytical Results 680935

Terracon-Lubbock, Lubbock, TX

Holstun Line Release

Sample Id: **SW.1 - (3.5-4)**

Matrix: Soil

Date Received: 12.11.2020 16:45

Lab Sample Id: 680935-002

Date Collected: 12.10.2020 14:05

Sample Depth: 3.5 - 4 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 12.15.2020 17:05

% Moisture:

Basis: Wet Weight

Seq Number: 3145041

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	344	25.0	mg/kg	12.15.2020 22:59		5

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 12.15.2020 16:00

% Moisture:

Basis: Wet Weight

Seq Number: 3145078

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.16.2020 04:15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.16.2020 04:15	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.16.2020 04:15	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	12.16.2020 04:15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-130	12.16.2020 04:15	
o-Terphenyl	84-15-1	105	%	70-130	12.16.2020 04:15	



Certificate of Analytical Results 680935

Terracon-Lubbock, Lubbock, TX

Holstun Line Release

Sample Id: **SW.1 - (3.5-4)**

Matrix: Soil

Date Received: 12.11.2020 16:45

Lab Sample Id: 680935-002

Date Collected: 12.10.2020 14:05

Sample Depth: 3.5 - 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MNR

Analyst: MNR

Date Prep: 12.15.2020 10:00

% Moisture:

Seq Number: 3145007

Basis: Wet Weight

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.00209	0.00200	mg/kg	12.16.2020 01:16		1
Toluene	108-88-3	0.0230	0.00200	mg/kg	12.16.2020 01:16		1
Ethylbenzene	100-41-4	0.0178	0.00200	mg/kg	12.16.2020 01:16		1
m,p-Xylenes	179601-23-1	0.0794	0.00399	mg/kg	12.16.2020 01:16		1
o-Xylene	95-47-6	0.0235	0.00200	mg/kg	12.16.2020 01:16		1
Xylenes, Total	1330-20-7	0.103	0.00200	mg/kg	12.16.2020 01:16		1
Total BTEX		0.146	0.00200	mg/kg	12.16.2020 01:16		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	70-130	12.16.2020 01:16	
1,4-Difluorobenzene	540-36-3	97	%	70-130	12.16.2020 01:16	



Certificate of Analytical Results 680935

Terracon-Lubbock, Lubbock, TX

Holstun Line Release

Sample Id: **WW.1 - (3.5-4)**

Matrix: Soil

Date Received: 12.11.2020 16:45

Lab Sample Id: 680935-003

Date Collected: 12.10.2020 14:10

Sample Depth: 3.5 - 4 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 12.15.2020 17:05

% Moisture:

Basis: Wet Weight

Seq Number: 3145041

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	346	24.9	mg/kg	12.15.2020 23:04		5

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 12.15.2020 16:00

% Moisture:

Basis: Wet Weight

Seq Number: 3145078

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	12.16.2020 04:37	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	12.16.2020 04:37	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	12.16.2020 04:37	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	12.16.2020 04:37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-130	12.16.2020 04:37	
o-Terphenyl	84-15-1	91	%	70-130	12.16.2020 04:37	



Certificate of Analytical Results 680935

Terracon-Lubbock, Lubbock, TX

Holstun Line Release

Sample Id: **WW.1 - (3.5-4)**

Matrix: Soil

Date Received: 12.11.2020 16:45

Lab Sample Id: 680935-003

Date Collected: 12.10.2020 14:10

Sample Depth: 3.5 - 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MNR

Analyst: MNR

Date Prep: 12.15.2020 10:00

% Moisture:

Seq Number: 3145007

Basis: Wet Weight

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.15.2020 19:38	U	1
Toluene	108-88-3	0.0144	0.00200	mg/kg	12.15.2020 19:38		1
Ethylbenzene	100-41-4	0.0132	0.00200	mg/kg	12.15.2020 19:38		1
m,p-Xylenes	179601-23-1	0.0607	0.00399	mg/kg	12.15.2020 19:38		1
o-Xylene	95-47-6	0.0183	0.00200	mg/kg	12.15.2020 19:38		1
Xylenes, Total	1330-20-7	0.0790	0.00200	mg/kg	12.15.2020 19:38		1
Total BTEX		0.107	0.00200	mg/kg	12.15.2020 19:38		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	92	%	70-130	12.15.2020 19:38	
4-Bromofluorobenzene	460-00-4	105	%	70-130	12.15.2020 19:38	

Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



Terracon-Lubbock

Holstun Line Release

Analytical Method: Chloride by EPA 300

Seq Number: 3145041

MB Sample Id: 7717198-1-BLK

Matrix: Solid

LCS Sample Id: 7717198-1-BKS

Prep Method: E300P

Date Prep: 12.15.2020

LCSD Sample Id: 7717198-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	254	102	254	102	90-110	0	20	mg/kg	12.15.2020 21:20	

Analytical Method: Chloride by EPA 300

Seq Number: 3145041

Parent Sample Id: 680923-011

Matrix: Soil

MS Sample Id: 680923-011 S

Prep Method: E300P

Date Prep: 12.15.2020

MSD Sample Id: 680923-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	485	2500	3320	113	3270	111	90-110	2	20	mg/kg	12.15.2020 21:36	X

Analytical Method: Chloride by EPA 300

Seq Number: 3145041

Parent Sample Id: 680935-001

Matrix: Soil

MS Sample Id: 680935-001 S

Prep Method: E300P

Date Prep: 12.15.2020

MSD Sample Id: 680935-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	359	1240	1710	109	1700	108	90-110	1	20	mg/kg	12.15.2020 22:49	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3145078

MB Sample Id: 7717219-1-BLK

Matrix: Solid

LCS Sample Id: 7717219-1-BKS

Prep Method: SW8015P

Date Prep: 12.16.2020

LCSD Sample Id: 7717219-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	945	95	949	95	70-130	0	20	mg/kg	12.15.2020 22:08	
Diesel Range Organics (DRO)	<50.0	1000	973	97	950	95	70-130	2	20	mg/kg	12.15.2020 22:08	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	93		100		97		70-130	%	12.15.2020 22:08
o-Terphenyl	97		96		96		70-130	%	12.15.2020 22:08

Analytical Method: TPH by SW8015 Mod

Seq Number: 3145078

Matrix: Solid

MB Sample Id: 7717219-1-BLK

Prep Method: SW8015P

Date Prep: 12.16.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	12.15.2020 21:46	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Terracon-Lubbock

Holstun Line Release

Analytical Method: TPH by SW8015 Mod

Seq Number: 3145078

Parent Sample Id: 680913-001

Matrix: Soil

MS Sample Id: 680913-001 S

Prep Method: SW8015P

Date Prep: 12.16.2020

MSD Sample Id: 680913-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.9	997	1050	105	1100	110	70-130	5	20	mg/kg	12.15.2020 23:13	
Diesel Range Organics (DRO)	<49.9	997	1060	106	1170	117	70-130	10	20	mg/kg	12.15.2020 23:13	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	96		103		70-130	%	12.15.2020 23:13
o-Terphenyl	88		102		70-130	%	12.15.2020 23:13

Analytical Method: BTEX by EPA 8021B

Seq Number: 3145007

MB Sample Id: 7717200-1-BLK

Matrix: Solid

LCS Sample Id: 7717200-1-BKS

Prep Method: SW5035A

Date Prep: 12.15.2020

LCSD Sample Id: 7717200-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0760	76	0.0767	77	70-130	1	35	mg/kg	12.15.2020 12:32	
Toluene	<0.00200	0.100	0.0805	81	0.0801	80	70-130	0	35	mg/kg	12.15.2020 12:32	
Ethylbenzene	<0.00200	0.100	0.0875	88	0.0911	91	70-130	4	35	mg/kg	12.15.2020 12:32	
m,p-Xylenes	<0.00400	0.200	0.166	83	0.164	82	70-130	1	35	mg/kg	12.15.2020 12:32	
o-Xylene	<0.00200	0.100	0.103	103	0.0872	87	70-130	17	35	mg/kg	12.15.2020 12:32	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	81		99		98		70-130	%	12.15.2020 12:32
4-Bromofluorobenzene	74		107		96		70-130	%	12.15.2020 12:32

Analytical Method: BTEX by EPA 8021B

Seq Number: 3144975

MB Sample Id: 7717155-1-BLK

Matrix: Solid

LCS Sample Id: 7717155-1-BKS

Prep Method: SW5035A

Date Prep: 12.15.2020

LCSD Sample Id: 7717155-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0743	74	0.0979	98	70-130	27	35	mg/kg	12.15.2020 11:00	
Toluene	<0.00200	0.100	0.0733	73	0.0900	90	70-130	20	35	mg/kg	12.15.2020 11:00	
Ethylbenzene	<0.00200	0.100	0.0885	89	0.100	100	70-130	12	35	mg/kg	12.15.2020 11:00	
m,p-Xylenes	<0.00400	0.200	0.175	88	0.198	99	70-130	12	35	mg/kg	12.15.2020 11:00	
o-Xylene	<0.00200	0.100	0.0887	89	0.0994	99	70-130	11	35	mg/kg	12.15.2020 11:00	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		103		104		70-130	%	12.15.2020 11:00
4-Bromofluorobenzene	109		103		103		70-130	%	12.15.2020 11:00

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec



Terracon-Lubbock

Holstun Line Release

Analytical Method: BTEX by EPA 8021B

Seq Number: 3145007

Parent Sample Id: 680826-001

Matrix: Soil

MS Sample Id: 680826-001 S

Prep Method: SW5035A

Date Prep: 12.15.2020

MSD Sample Id: 680826-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.0141	14	0.0122	12	70-130	14	35	mg/kg	12.15.2020 13:37	X
Toluene	<0.00199	0.0996	0.0142	14	0.00944	9	70-130	40	35	mg/kg	12.15.2020 13:37	XF
Ethylbenzene	<0.00199	0.0996	0.0150	15	0.0105	11	70-130	35	35	mg/kg	12.15.2020 13:37	X
m,p-Xylenes	<0.00398	0.199	0.0195	10	0.0116	6	70-130	51	35	mg/kg	12.15.2020 13:37	XF
o-Xylene	<0.00199	0.0996	0.0217	22	0.0158	16	70-130	31	35	mg/kg	12.15.2020 13:37	X

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		78		70-130	%	12.15.2020 13:37
4-Bromofluorobenzene	100		79		70-130	%	12.15.2020 13:37

Analytical Method: BTEX by EPA 8021B

Seq Number: 3144975

Parent Sample Id: 680977-001

Matrix: Soil

MS Sample Id: 680977-001 S

Prep Method: SW5035A

Date Prep: 12.15.2020

MSD Sample Id: 680977-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	2.72	0.0990	1.39	0	1.36	0	70-130	2	35	mg/kg	12.15.2020 11:41	X
Toluene	3.46	0.0990	2.31	0	2.33	0	70-130	1	35	mg/kg	12.15.2020 11:41	X
Ethylbenzene	0.448	0.0990	0.405	0	0.367	0	70-130	10	35	mg/kg	12.15.2020 11:41	X
m,p-Xylenes	0.858	0.198	0.836	0	0.761	0	70-130	9	35	mg/kg	12.15.2020 11:41	X
o-Xylene	0.299	0.0990	0.315	16	0.275	0	70-130	14	35	mg/kg	12.15.2020 11:41	X

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	129		125		70-130	%	12.15.2020 11:41
4-Bromofluorobenzene	133	**	131	**	70-130	%	12.15.2020 11:41

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
 A = Parent Result
 C = MS/LCS Result
 E = MSD/LCSD Result

MS = Matrix Spike
 B = Spike Added
 D = MSD/LCSD % Rec

Inter-Office Shipment

IOS Number : **74766**

Date/Time: 12.14.2020

Created by: Randall Lee

Please send report to: Jessica Kramer

Lab# From: **Lubbock**

Delivery Priority:

Address: 6701 Aberdeen, Suite 9 Lubbock, TX 79424

Lab# To: **Midland**

Air Bill No.:

E-Mail: jessica.kramer@eurofinset.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
680935-001	S	NW.1 - (3.5-4)	12.10.2020 14:00	E300_CL	Chloride by EPA 300	12.15.2020	01.07.2021	JKR	CL	
680935-001	S	NW.1 - (3.5-4)	12.10.2020 14:00	SW8015MOD_NM	TPH by SW8015 Mod	12.15.2020	12.24.2020	JKR	PHCC10C28 PHCC28C3	
680935-001	S	NW.1 - (3.5-4)	12.10.2020 14:00	SW8021B	BTEX by EPA 8021B	12.15.2020	12.24.2020	JKR	BR4FBZ BZ BZME EBZ	
680935-002	S	SW.1 - (3.5-4)	12.10.2020 14:05	E300_CL	Chloride by EPA 300	12.15.2020	01.07.2021	JKR	CL	
680935-002	S	SW.1 - (3.5-4)	12.10.2020 14:05	SW8021B	BTEX by EPA 8021B	12.15.2020	12.24.2020	JKR	BR4FBZ BZ BZME EBZ	
680935-002	S	SW.1 - (3.5-4)	12.10.2020 14:05	SW8015MOD_NM	TPH by SW8015 Mod	12.15.2020	12.24.2020	JKR	PHCC10C28 PHCC28C3	
680935-003	S	WW.1 - (3.5-4)	12.10.2020 14:10	E300_CL	Chloride by EPA 300	12.15.2020	01.07.2021	JKR	CL	
680935-003	S	WW.1 - (3.5-4)	12.10.2020 14:10	SW8015MOD_NM	TPH by SW8015 Mod	12.15.2020	12.24.2020	JKR	PHCC10C28 PHCC28C3	
680935-003	S	WW.1 - (3.5-4)	12.10.2020 14:10	SW8021B	BTEX by EPA 8021B	12.15.2020	12.24.2020	JKR	BR4FBZ BZ BZME EBZ	

Inter Office Shipment or Sample Comments:

Relinquished By:



Randall Lee

Date Relinquished: 12.14.2020

Received By:



Jessica Kramer

Date Received: 12.16.2020

Cooler Temperature: 2.9



Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 74766

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used :

Sent By: Randall Lee

Date Sent: 12.14.2020 01.25 PM

Received By: Jessica Kramer

Date Received: 12.16.2020 09.10 AM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	2.9
#2 *Shipping container in good condition?	Yes
#3 *Samples received with appropriate temperature?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 *Custody Seals Signed and dated for Containers/coolers	Yes
#6 *IOS present?	Yes
#7 Any missing/extra samples?	No
#8 IOS agrees with sample label(s)/matrix?	Yes
#9 Sample matrix/ properties agree with IOS?	Yes
#10 Samples in proper container/ bottle?	Yes
#11 Samples properly preserved?	Yes
#12 Sample container(s) intact?	Yes
#13 Sufficient sample amount for indicated test(s)?	Yes
#14 All samples received within hold time?	Yes

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ Contacted by : _____ Date: _____

Checklist reviewed by:

Jessica Kramer

Jessica Kramer

Date: 12.16.2020

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Terracon-Lubbock

Date/ Time Received: 12.11.2020 04.45.00 PM

Work Order #: 680935

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : IR-4

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	-4.8
#2 *Shipping container in good condition?	N/A
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	Yes Xenco Midland
#18 Water VOC samples have zero headspace?	N/A

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:

PH Device/Lot#:

Checklist completed by: Teddy Randall Lee
Randall Lee

Date: 12.14.2020

Checklist reviewed by: Jessica Kramer
Jessica Kramer

Date: 12.15.2020

APPENDIX E – TERRACON STANDARD OF CARE, LIMITATION, AND RELIANCE

Standard of Care

Terracon's services were performed in a manner consistent with generally accepted practices of the profession undertaken in similar studies in the same geographical area during the same time. Terracon makes no warranties, either express or implied, regarding the findings, conclusions, or recommendations. Please note that Terracon does not warrant the work of laboratories, regulatory agencies, or other third parties supplying information used in the preparation of the report. These services were performed in accordance with the scope of work agreed with you, Solaris Water Midstream, as reflected in our proposal (PA4197040).

Additional Scope Limitations

Development of this RAP is based upon information provided by the Client and Terracon's remediation and construction services line. Such information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, nondetectable, or not present during these services. We cannot represent that the site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those by information provided by the Client. The data, interpretations, findings, and our recommendations are based solely upon reformation executed within the scope of these services.

Reliance

This report has been prepared for the exclusive use of Solaris Water Midstream, and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the site) is prohibited without the express written authorization of Solaris Water Midstream and Terracon. Any unauthorized distribution or reuse is at Solaris Water Midstream sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions, and limitations stated in the proposal and Solaris Water Midstream and Terracon's Master Services Agreement. The limitation of liability defined in the terms and conditions is the aggregate limit of Terracon's liability to Solaris Water Midstream and all relying parties unless otherwise agreed in writing.

District I

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District III

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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 24807

CONDITIONS

Operator: Spur Energy Partners LLC 9655 Katy Freeway Houston, TX 77024	OGRID: 328947
	Action Number: 24807
	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 #NRM2013945547 HOLSTUN WATER LINE, thank you. This closure is approved.	7/26/2021