Form C-141
Page 6

State of New Mexico
Oil Conservation Division

Incident ID	nRM2013950819
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 Guerriero Title: Senior Staff Scientist

Signature: [signature] Date: 6-16-22

email: SBGuerriero@Tetratech.com Telephone: 806-544-9276

OCD Only

Received by: Robert Hamlet Date: 10/24/2022

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

Closure Approved by: Robert Hamlet Date: 10/24/2022

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. Site is on the North side of the road.

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

April 2, 2021
Terracon Project No. AR207089

Prepared for:
Spur Energy Partners
Houston, Texas

Prepared by:
Terracon Consultants, Inc.
Lubbock, Texas

April 2, 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.

- Based on the depth to groundwater and the confirmed vertical delineation, 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 Guidlines (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	Erin Loyd, P.G. (TX)
Staff Scientist	Principal
Lubbock	Office Manager – Lubbock

Terracon

TABLE OF CONTENTS

TABLE OF CONTENTS (CONTINUED)

Closure Report
Holstun Water Line Relese
Unit J, Section 33, T26S, R25E
Eddy County, New Mexico
Terracon Project No. AR207089
April 2, 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 entireity 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 land owner (Kevin Wellbanks). A Topographic Map illustrating the site location is included as 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 as 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” poly line.

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:

Required Information	Site and Release information	
Responsible party Local contact	The facility is operated by Spur Energy Partners	
	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 phone call by Kenny Kidd (Spur) on May 5, 2020. Notice of the 2nd 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: occured 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	Pipeline was shut in, and pipelines that were malfunctioning or affected were replaced and repaired.	

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	POD Number: RA 10826 Depth to Groundwater: 250 ft. bgs Distance to Well: 1.59 miles to the west Date Drilled: July 18, 2007
	Groundwater Quality: 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 site observations within the extent of the release margins, the potential for Karst formations in this specific area are 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.

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 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.

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 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.

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 side walls and the base of the open excavation in conjunction with reclamation activities. Confirmation composite samples were collected every 200 linear feet

along the perimeter of the side wall, 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 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 was 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 subsequent to remediation activities were below the NMOCD RALs.

9.0 SOIL RECLAMATION AND REMEDIATION

Impacted soil will be remediated, reclamated and managed according to the criteria described below which is intended to protect fresh waters, 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 were 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, 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 a 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 intent of the reclamation and remedial approaches were to achieve compliance with NMOCD regulatory objectives in ensuring that any remaining contaminants will

not pose a threat to present or foreseeable beneficial use of fresh water, the 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 reseeding 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.

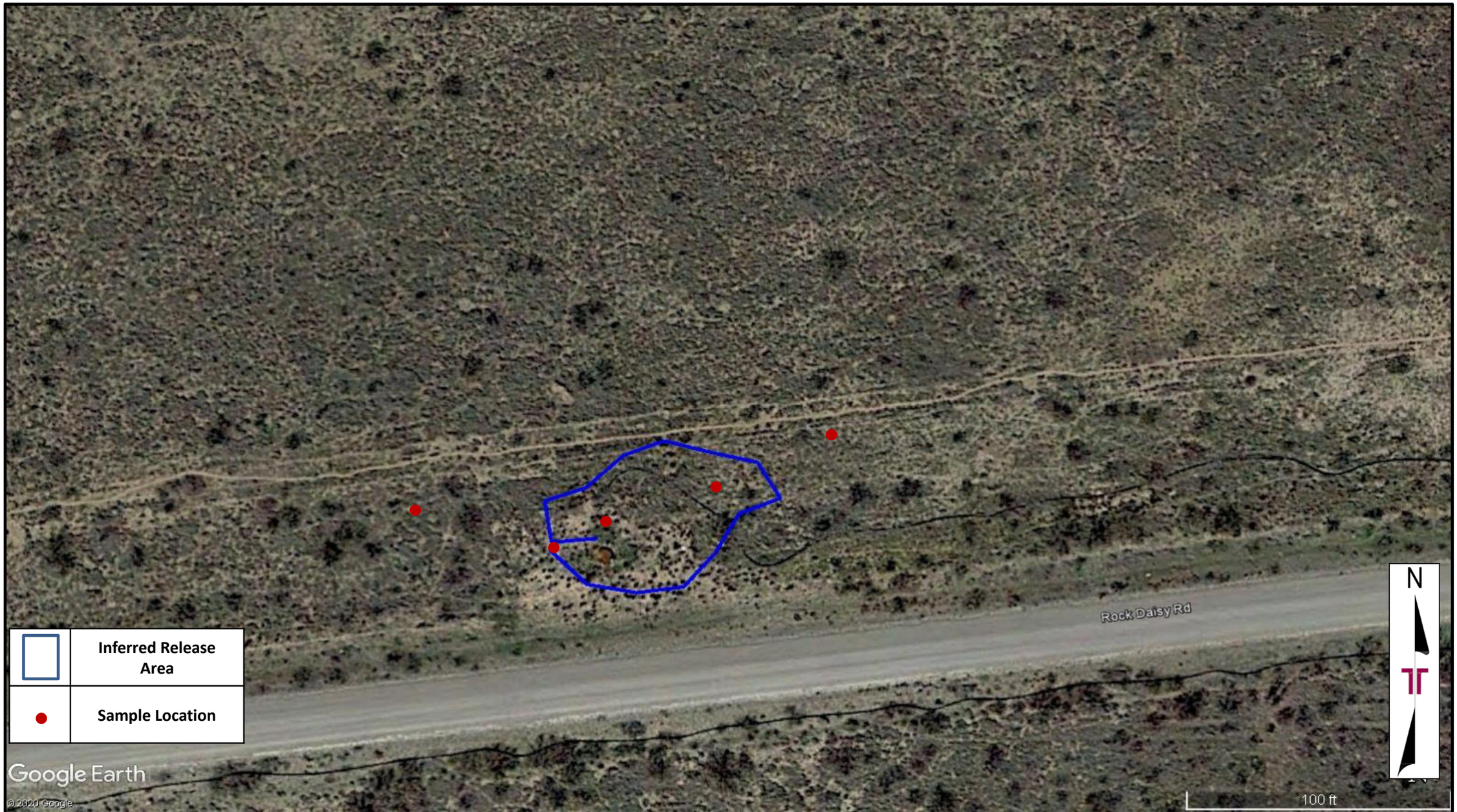
APPENDIX A – FIGURES AND TABLES

Project No.	AR207089
Scale:	As Shown
Source:	Google Earth
Image Date:	1978

Terracon
Consulting Engineers & Scientists
5827 50th St. Suite 1 Lubbock, Texas 79424
PH. (806) 300-0104 FAX. (806) 797 0947

Figure 1 – Topographic Map

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

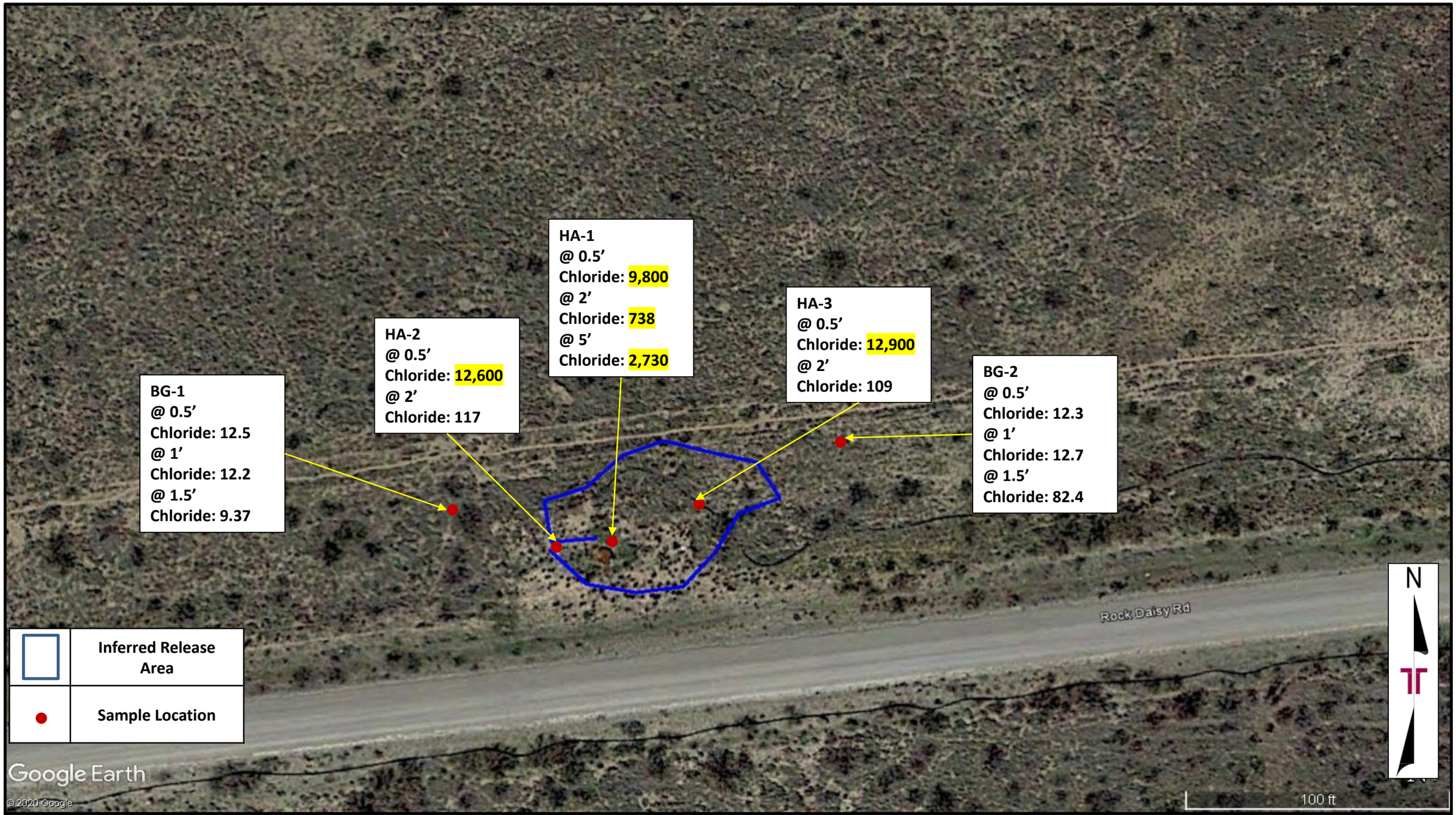


Project No.	AR207089
Scale:	As Shown
Source:	Google Earth
Image Date:	11/02/2017

Terracon
Consulting Engineers & Scientists
5827 50th St. Suite 1 Lubbock, Texas 79424
PH. (806) 300-0104 FAX. (806) 797 0947

Figure 2 – Site Map

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

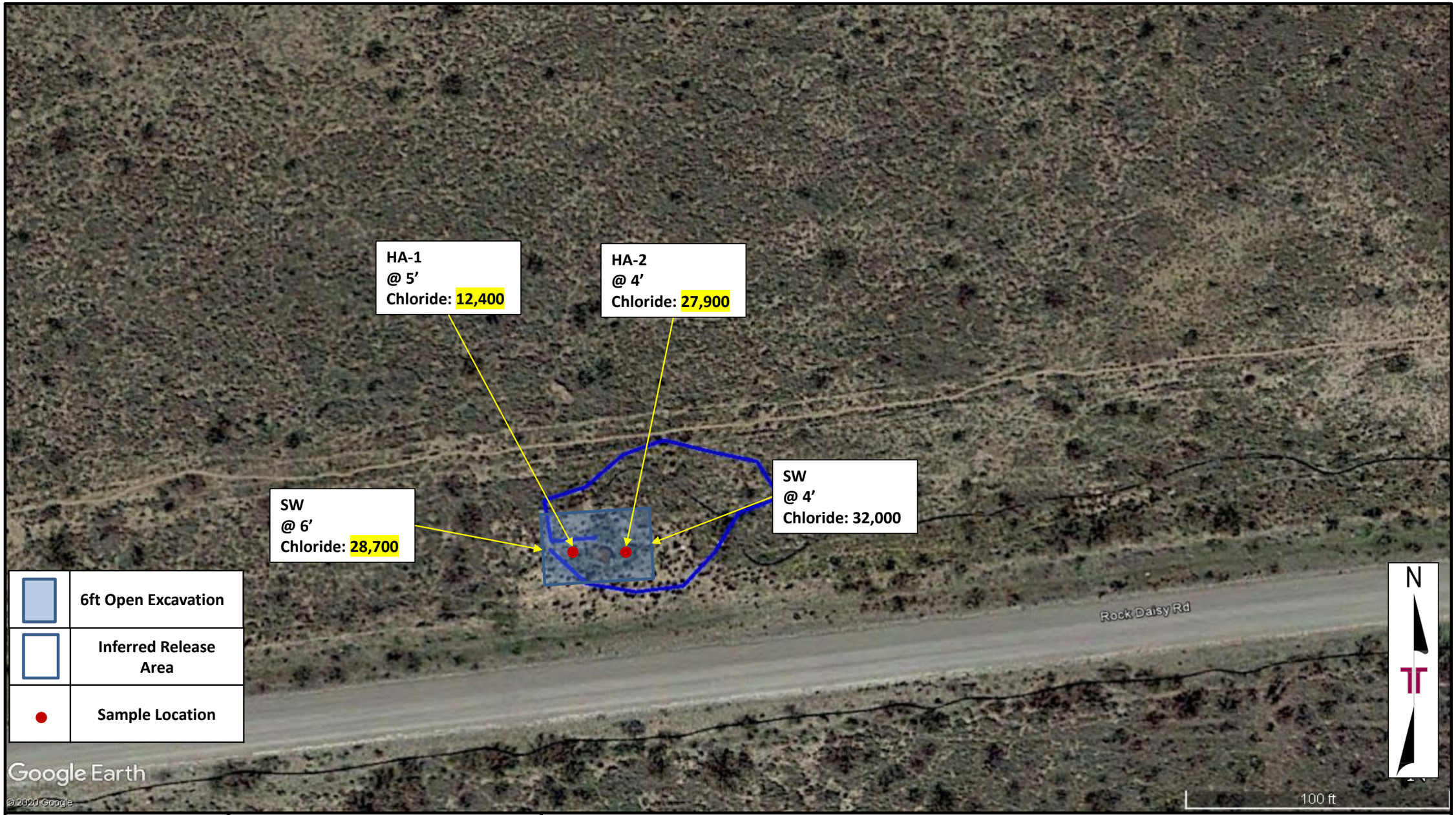


Project No.	AR207089
Scale:	As Shown
Source:	Google Earth
Image Date:	11/02/2017

Terracon
Consulting Engineers & Scientists
5827 50th St. Suite 1 Lubbock, Texas 79424
PH. (806) 300-0104 FAX. (806) 797 0947

Figure 3 – Initial Contamination Concentration Map

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

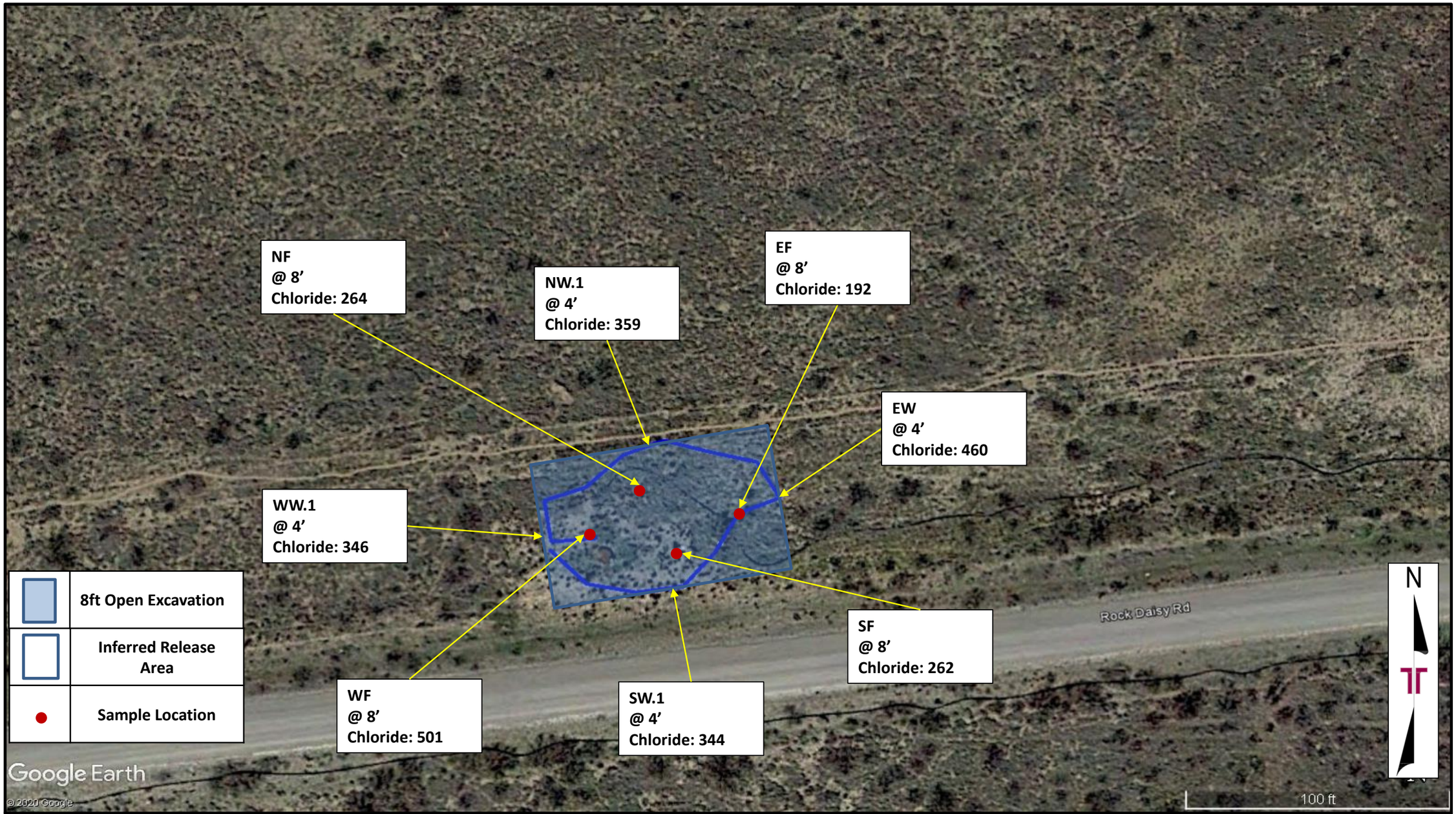


Project No.	AR207089
Scale:	As Shown
Source:	Google Earth
Image Date:	11/02/2017

Terracon
Consulting Engineers & Scientists
5827 50th St. Suite 1 Lubbock, Texas 79424
PH. (806) 300-0104 FAX. (806) 797 0947

Figure 4 – Additional Contamination Concentration Map

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



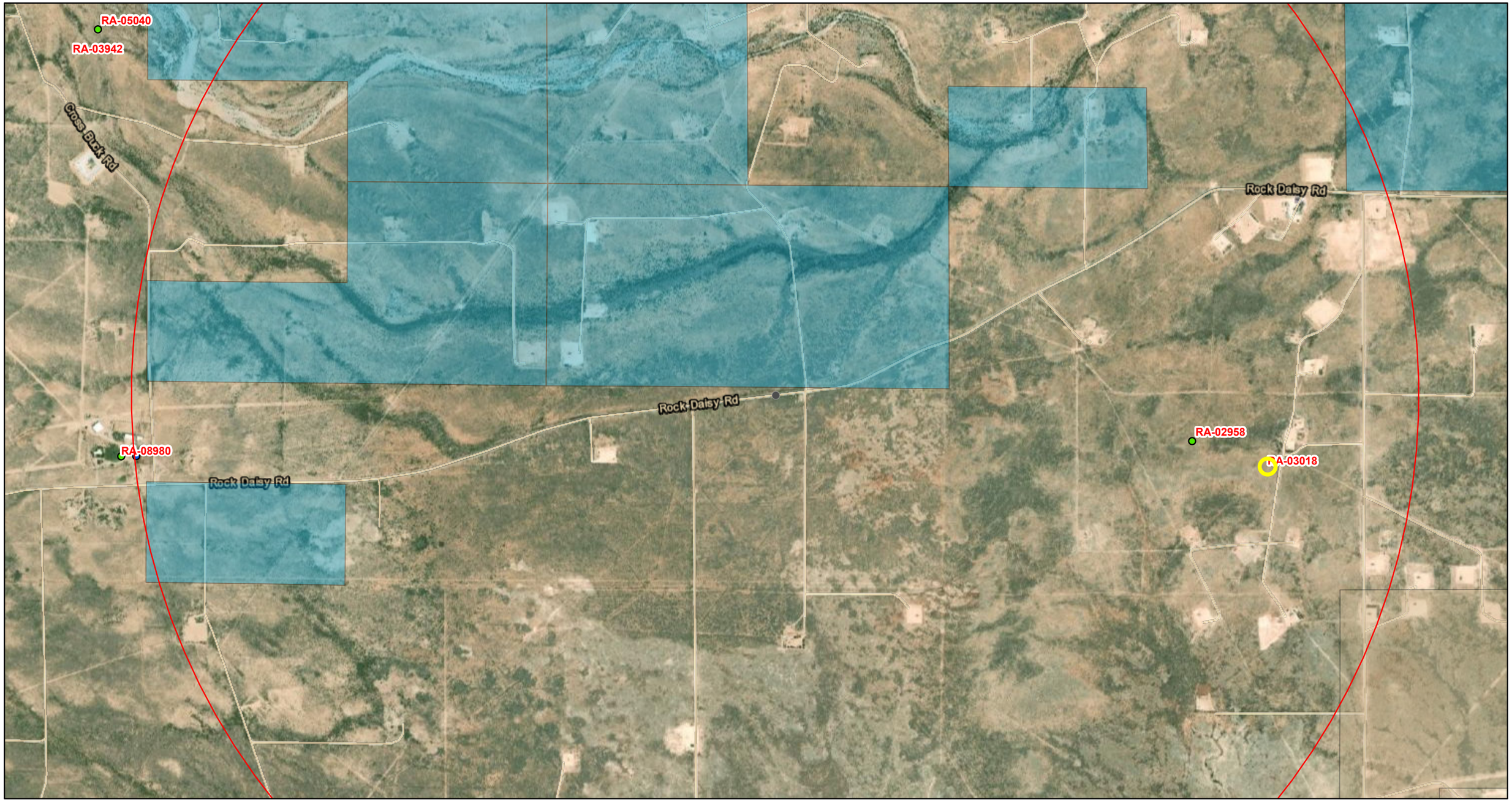
Project No.	AR207089
Scale:	As Shown
Source:	Google Earth
Image Date:	11/02/2017

Terracon
Consulting Engineers & Scientists
5827 50th St. Suite 1 Lubbock, Texas 79424
PH. (806) 300-0104 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
- Active
- Pending

OSE District Boundary

New Mexico State Trust Lands

Subsurface Estate

Both Estates

SiteBoundaries

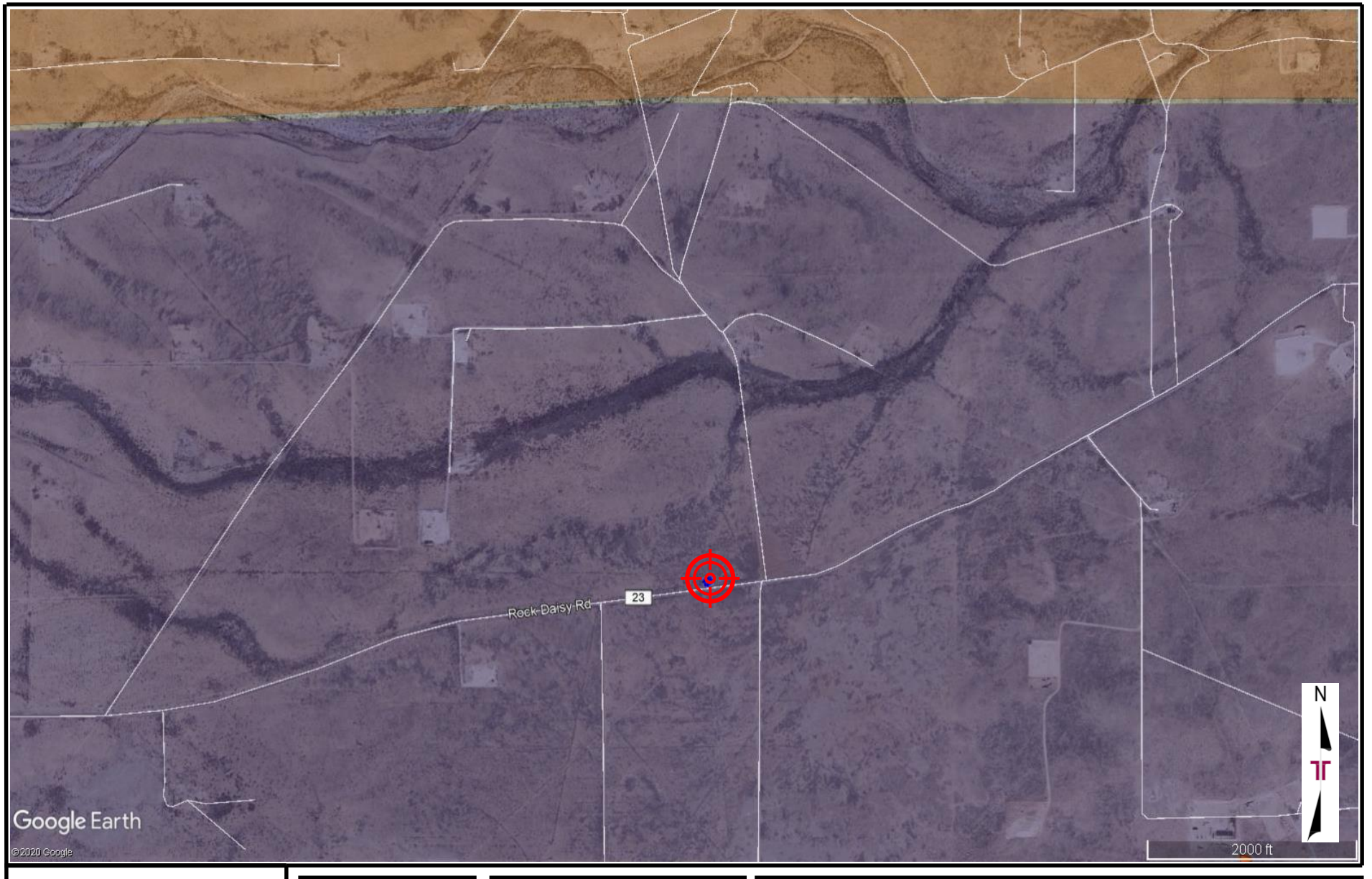
1:18,056

0 0.17 0.35 0.7 mi

0 0.3 0.6 1.2 km

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

OSE POD Locations



Site Location

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

Terracon
Consulting Engineers & Scientists
5827 50th Street, Suite 1 Lubbock, Texas 79424
PH. (806) 300 - 0140 FAX. (806) 797 - 0947

Figure 7 - Cave Karst Public UCP

Holstun Water Line Release
32.616751, -104.488446
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 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

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

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

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

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

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

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

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

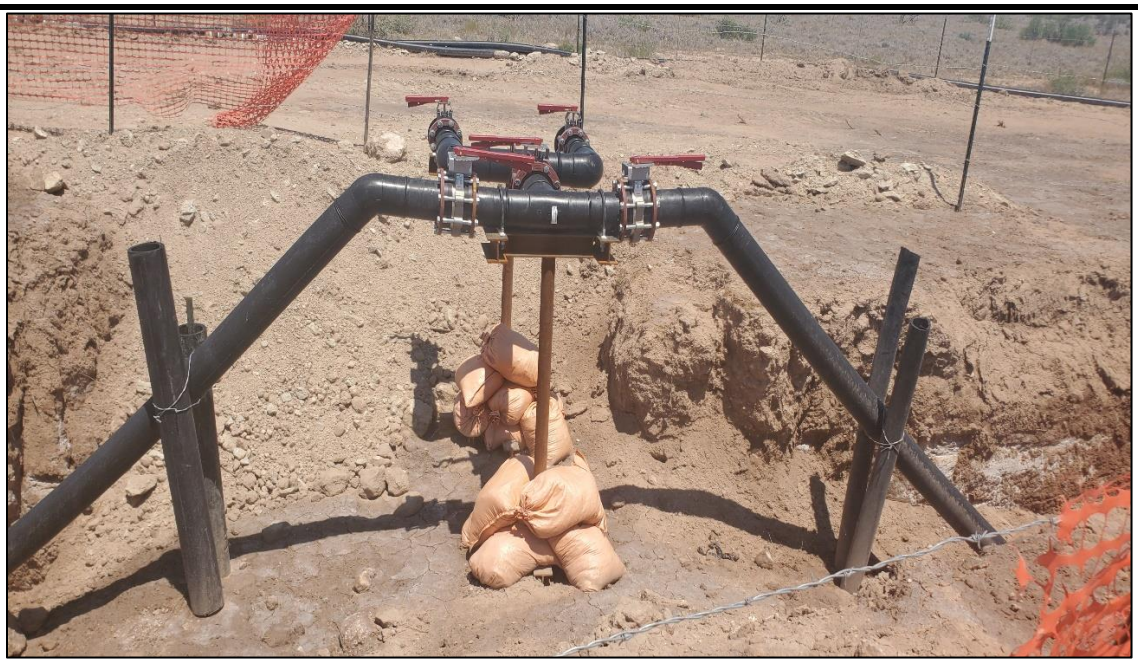


PHOTO 15: View of new header, facing north. 08/04/2020 / **TIME:** 1:21PM / **GPS:** 32.6168 -104.4888

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

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

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

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

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

Analysis Requested													
	Lab Id:	661868-001		661868-003		661868-005		661868-006		661868-008		661868-010	
	Field Id:	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)	
	Depth:	0-0.5 ft		1.5-2 ft		4.5-5 ft		0-0.5 ft		1.5-2 ft		4.5-5 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	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	***Extracted:***	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	
	Analyzed:	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	
	Units/RL:	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	***Extracted:***	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	
	Analyzed:	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	
	Units/RL:	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	***Extracted:***	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	
	Analyzed:	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	
	Units/RL:	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

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

Analysis Requested													
	Lab Id:	661868-011		661868-013		661868-015		661868-016		661868-017		661868-018	
	Field Id:	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-.5)	
	Depth:	0-0.5 ft		1.5-2 ft		4.5-5 ft		0-0.5 ft		1.5-2 ft		0-0.5 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	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	***Extracted:***	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	
	Analyzed:	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	
	Units/RL:	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	***Extracted:***	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	
	Analyzed:	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	
	Units/RL:	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	***Extracted:***	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	
	Analyzed:	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	
	Units/RL:	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

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

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				

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,

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 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): *661868*

Report 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)**
Lab Sample Id: 661868-001

Matrix: Soil
Date Collected: 05.15.2020 11:55

Date Received:05.18.2020 14:10
Sample Depth: 0 - 0.5 ft

Analytical Method: Chloride by EPA 300
Tech: JYM
Analyst: JYM
Seq Number: 3126586

Date Prep: 05.20.2020 16:52

Prep Method: E300P
% Moisture:
Basis: Wet Weight
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
Tech: DRU
Analyst: ISU
Seq Number: 3127459

Date Prep: 05.28.2020 14:54

Prep Method: SW8015P
% Moisture:
Basis: Wet Weight
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	

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:	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	

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:	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	

Certificate of Analytical Results 661868

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	

Certificate of Analytical Results 661868

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	

Certificate of Analytical Results 661868

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	

Certificate of Analytical Results 661868

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	

Certificate of Analytical Results 661868

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	

Certificate of Analytical Results 661868

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	

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:	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

QC Summary 661868

Terracon-Lubbock

Holstun Release

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3126586 — Matrix: Solid — Date Prep: 05.20.2020
MB Sample Id: 7703771-1-BLK — LCS Sample Id: 7703771-1-BKS — 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 — Prep Method: E300P
Seq Number: 3126586 — Matrix: Soil — Date Prep: 05.20.2020
Parent Sample Id: 661868-001 — MS Sample Id: 661868-001 S — 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 — Prep Method: E300P
Seq Number: 3126586 — Matrix: Soil — Date Prep: 05.20.2020
Parent Sample Id: 661868-020 — MS Sample Id: 661868-020 S — 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 — Prep Method: SW8015P
Seq Number: 3127458 — Matrix: Solid — Date Prep: 05.28.2020
MB Sample Id: 7704262-1-BLK — LCS Sample Id: 7704262-1-BKS — 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 — Prep Method: SW8015P
Seq Number: 3127459 — Matrix: Solid — Date Prep: 05.28.2020
MB Sample Id: 7704264-1-BLK — LCS Sample Id: 7704264-1-BKS — 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 [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference 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

QC Summary 661868

Terracon-Lubbock

Holstun Release

Analytical Method: TPH by SW8015 Mod
Seq Number: 3127458
Matrix: Solid
MB Sample Id: 7704262-1-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	05.31.2020 14:20	

Analytical Method: TPH by SW8015 Mod
Seq Number: 3127459
Matrix: Solid
MB Sample Id: 7704264-1-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	05.31.2020 14:40	

Analytical Method: TPH by SW8015 Mod
Seq Number: 3127458
Parent Sample Id: 661942-003
Matrix: Soil
MS Sample Id: 661942-003 S
Prep Method: SW8015P
Date Prep: 05.28.2020
MSD Sample Id: 661942-003 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)	21.5	999	866	85	926	90	70-135	7	35	mg/kg	05.29.2020 19:19	
Diesel Range Organics (DRO)	<9.99	999	1010	101	1100	110	70-135	9	35	mg/kg	05.29.2020 19:19	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	108		115		70-135	%	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
Parent Sample Id: 661868-001
Matrix: Soil
MS Sample Id: 661868-001 S
Prep Method: SW8015P
Date Prep: 05.28.2020
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
Gasoline Range Hydrocarbons (GRO)	<10.1	1010	952	94	908	91	70-135	5	35	mg/kg	05.29.2020 14:50	
Diesel Range Organics (DRO)	<10.1	1010	1140	113	1080	108	70-135	5	35	mg/kg	05.29.2020 14:50	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	118		113		70-135	%	05.29.2020 14:50
o-Terphenyl	119		117		70-135	%	05.29.2020 14:50

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference 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

QC Summary 661868

Terracon-Lubbock

Holstun Release

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A

Seq Number: 3126469 Matrix: Solid Date Prep: 05.19.2020

MB Sample Id: 7703666-1-BLK LCS Sample Id: 7703666-1-BKS 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** Prep Method: SW5035A

Seq Number: 3126469 Matrix: Soil Date Prep: 05.19.2020

Parent Sample Id: 661868-001 MS Sample Id: 661868-001 S 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 [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference 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

6/6/1868

Terracon

CHAIN OF CUSTODY RECORD

Laboratory: Xenco
Address: 6701 Aberdeen
Lubbock, Texas 79424
Phone:
Contact: J. Guesnier 806-544-9276
SRS #:
Sampler's Signature

Office Location: Lubbock
Project Manager: J. Guesnier
Sampler's Name: J. Guesnier

Project Number: AR207084
Project Name: Holstun line Release ~~GJ South Water Dist Site~~

LAB USE ONLY
DUE DATE: 6/14/22
TEMP OF COOLER WHEN RECEIVED (°C): 2.4

Page 1 of 2

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 4 oz Glass	40 ml VOA	60 ml VOA	5035 kit	ANALYSIS REQUESTED: Chloride (EPA Method 300)	TPH Extended 8015	BTEX (EPA Method 8021B)	Hold				Lab Sample ID
S	5/15/2020	11:55		X	BG-1 (0-0.5)	0	0.5	X				X	X	X					1
S	5/15/2020	12:00		X	BG-1 (0.5-1)	0.5	1	X							X				2
S	5/15/2020	12:05		X	BG-1 (1.5-2)	1.5	2	X				X	X	X					3
S	5/15/2020	12:10		X	BG-1 (3-3.5)	3	3.5	X							X				4
S	5/15/2020	12:15		X	BG-1 (4.5-5)	4.5	5	X				X	X	X					5
S	5/15/2020	12:20		X	BG-2 (0-0.5)	0	0.5	X				X	X	X					6
S	5/15/2020	12:25		X	BG-2 (0.5-1)	0.5	1	X							X				7
S	5/15/2020	12:30		X	BG-2 (1.5-2)	1.5	2	X				X	X	X					8
	5/15/2020	12:35		X	BG-2 (3-3.5)	3	3.5	X							X				9
	5/15/2020	12:40		X	BG-2 (4.5-5)	4.5	5	X				X	X	X					10
	5/15/2020	12:45		X	HA-1 (0-0.5)	0	0.5	X				X	X	X					11
	5/15/2020	12:50		X	HA-1 (0.5-1)	0.5	1	X							X				12
	5/15/2020	12:55		X	HA-1 (1.5-2)	1.5	2	X				X	X	X					13
	5/15/2020	13:00		X	HA-1 (3-3.5)	3	3.5	X							X				14
	5/15/2020	13:05		X	HA-1 (4.5-5)	4.5	5	X				X	X	X					15

TURNAROUND TIME: ☒ Normal ☐ 48-Hour Rush ☐ 24-Hour Rush

TRRP Laboratory Review Checklist ☐ Yes ☐ No

Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
	5-18-22	2:10		6/18/22	14:10
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:

NOTES: Client: Spur Energy Partners

e-mail results to:
bryant.mcbrayer@terracon.com
erin.loyd@terracon.com
jrguesnier@terracon.com

Matrix: WW-Wastewater; W - Water; S - Soil; L - Liquid; A - Air Bag; C - Charcoal tube; SL - Sludge
Container: VOA - 40 ml vial; A/G - Amber Glass 1L; 250 ml = Glass wide mouth; P/O - Plastic or other _____

66186B

CHAIN OF CUSTODY RECORD

Terracon

Laboratory: Xenco
Address: 6701 Aberdeen, Lubbock, Texas 79424
Phone:
Contact: J. Guesnier 806-544-9276
SRS #:

Office Location: Lubbock
Project Manager: J. Guesnier
Sampler's Name: J. Guesnier
Sampler's Signature:

Project Number: AR207084
Project Name: Holstun line Release ~~Gl South Water Dist Site~~

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE:
TEMP OF COOLER WHEN RECEIVED (°C): 2.0 | 1.8

Page 2 of 2

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 4 oz Glass	40 ml VOA	60 ml VOA	5035 kit	Chloride (EPA Method 300)	TPH Extended 8015	BTEX (EPA Method 8021B)	Hold				Lab Sample ID
S	5/15/2020	13:10		X	HA-2 (0-0.5)	0	0.5	X				X	X	X					16
S	5/15/2020	13:20		X	HA-2 (1.5-2)	1.5	2	X				X	X	X					17
S	5/15/2020	13:25		X	HA-3 (0-0.5)	0	0.5	X				X	X	X					18
S	5/15/2020	13:30		X	HA-3 (0.5-1)	0.5	1	X							X				19
S	5/15/2020	13:35		X	HA-3 (1.5-2)	1.5	2	X				X	X	X					20

TURNAROUND TIME: ☒ Normal ☐ 48-Hour Rush ☐ 24-Hour Rush
TRRP Laboratory Review Checklist ☐ Yes ☐ No

Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
	5-18-20	2:10		5/18/20	14:10
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:

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

Matrix: WW-Wastewater; W - Water; S - Soil; L - Liquid; A - Air Bag; C - Charcoal tube; SL - Sludge
Container: VOA - 40 ml vial; A/G - Amber Glass 1L; 250 ml = Glass wide mouth; P/O - Plastic or other _____

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 PHCC28C35	
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 PHCC28C35	
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 PHCC28C35	
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 PHCC28C35	
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 PHCC28C35	

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

Brenda Ward

Date Relinquished: 05.19.2020

Received By: Jhyrom Edralin

Jhyrom Edralin

Date Received: 05.20.2020

Cooler Temperature: 3.5

XENCO Laboratories

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: _____ Date: 05.20.2020
Jhyrom Edralin

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**	TPH & CHLORIDES SENT TO STAFFORD
#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 Date: 05.18.2020
Brenda Ward

Checklist reviewed by: Jessica Kramer Date: 05.19.2020
Jessica Kramer

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				

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

Jessica Kramer
Project Manager

Final 1.000

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,

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): *661923*

Report 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

QC Summary 661923

Terracon-Lubbock

Holstun 2nd line release

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3126586 — Matrix: Solid — Date Prep: 05.20.2020
MB Sample Id: 7703771-1-BLK — LCS Sample Id: 7703771-1-BKS — 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 — Prep Method: E300P
Seq Number: 3126586 — Matrix: Soil — Date Prep: 05.20.2020
Parent Sample Id: 661868-001 — MS Sample Id: 661868-001 S — 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 — Prep Method: E300P
Seq Number: 3126586 — Matrix: Soil — Date Prep: 05.20.2020
Parent Sample Id: 661868-020 — MS Sample Id: 661868-020 S — 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 — Prep Method: SW8015P
Seq Number: 3127457 — Matrix: Solid — Date Prep: 05.28.2020
MB Sample Id: 7704261-1-BLK — LCS Sample Id: 7704261-1-BKS — 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 — Prep Method: SW8015P
Seq Number: 3127457 — Matrix: Solid — Date Prep: 05.28.2020
MB Sample Id: 7704261-1-BLK

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 — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

QC Summary 661923

Terracon-Lubbock

Holstun 2nd line release

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3127457 — Matrix: Soil — Date Prep: 05.28.2020
Parent Sample Id: 661901-003 — MS Sample Id: 661901-003 S — 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 — Prep Method: SW5035A
Seq Number: 3126469 — Matrix: Solid — Date Prep: 05.19.2020
MB Sample Id: 7703666-1-BLK — LCS Sample Id: 7703666-1-BKS — 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 — Prep Method: SW5035A
Seq Number: 3126469 — Matrix: Soil — Date Prep: 05.19.2020
Parent Sample Id: 661868-001 — MS Sample Id: 661868-001 S — 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 — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

66-1923

Terracon

CHAIN OF CUSTODY RECORD

Laboratory: Xenco
Address: 6701 Aberdeen
Lubbock, Texas 79424
Phone:
Contact: J. Guesnier 806-544-9276
SRS #:

Office Location: Lubbock
Project Manager: J. Guesnier
Sampler's Name: J. Guesnier
Sampler's Signature

Project Number: AR207089
Project Name: Holstun 2nd line release

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE:
TEMP OF COOLER WHEN RECEIVED (°C): 2.0/1.8

Page 1 of 1

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 4 oz Glass	40 ml VOA	60 ml VOA	5035 kit	Chloride (EPA Method 300)	TPH Extended 8015	BTEX (EPA Method 8021B)	Hold	Lab Sample ID
S	5/16/2020	12:30		X	HA-1 (5.5-6)	5.5	6	X				X	X	X		1
S	5/16/2020	12:35		X	HA-2 (4.5-5)	4.5	5	X				X	X	X		2
S	5/16/2020	12:40		X	SW-(3.5-4)	3.5	4	X				X	X	X		3
S	5/16/2020	12:45		X	SW-(5.5-6)	5.5	6	X				X	X	X		4

TURNAROUND TIME: ☒ Normal ☐ 48-Hour Rush ☐ 24-Hour Rush

TRRP Laboratory Review Checklist ☐ Yes ☐ No

Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time
	5-18-20	2:10		5/18/20	14:10

NOTES: Client: Spur Energy Partners

e-mail results to:
bryant.mcbrayer@terracon.com
erin.loyd@terracon.com
jrguesnier@terracon.com

Matrix: WW-Wastewater; W - Water; S - Soil; L - Liquid; A - Air Bag; C - Charcoal tube; SL - Sludge
Container: VOA - 40 ml vial; A/G - Amber Glass 1L; 250 ml = Glass wide mouth; P/O - Plastic or other _____

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

Brenda Ward

Date Relinquished: 05.19.2020

Received By: Jhyrom Edralin

Jhyrom Edralin

Date Received: 05.20.2020

Cooler Temperature: 3.5

XENCO Laboratories

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: _____ Date: 05.20.2020

Jhyrom Edralin

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 Date: 05.19.2020
Brenda Ward

Checklist reviewed by: Jessica Kramer Date: 05.19.2020
Jessica Kramer

eurofins | Environment Testing Xenco

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		671095-001		671095-002		671095-003		671095-004		671095-005		671095-006	
	Field Id:	NW-(3.5-4)		SW-(3.5-4)		WW-(3.5-4)		EW-(3.5-4)		NF-(7.5-8)		SF-(7.5-8)	
	Depth:	3.5-4		3.5-4		3.5-4		3.5-4		7.5-8		7.5-8	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	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	***Extracted:***	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	
	Analyzed:	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	
	Units/RL:	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	***Extracted:***	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	
	Analyzed:	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	
	Units/RL:	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	***Extracted:***	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	
	Analyzed:	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	
	Units/RL:	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

Jessica Kramer

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

eurofins | Environment Testing Xenco

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

Jessica Kramer

eurofins | Environment Testing Xenco

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)

eurofins | Environment Testing Xenco

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,

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

eurofins | Environment Testing Xenco

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

eurofins | Environment Testing Xenco

Client Name: Terracon-Lubbock

Project Name: Holstun 2nd Line Release

Project ID: *AR207089*
Work Order Number(s): *671095*

Report 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.

eurofins | Environment Testing Xenco

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	

eurofins | Environment Testing Xenco

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	

eurofins | Environment Testing Xenco

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	

eurofins | Environment Testing Xenco

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	

eurofins | Environment Testing Xenco

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	

eurofins | Environment Testing Xenco

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	

eurofins | Environment Testing Xenco

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	

eurofins | Environment Testing Xenco

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	

eurofins | Environment Testing Xenco

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	

eurofins | Environment Testing Xenco

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	

eurofins | Environment Testing Xenco

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:	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	

eurofins | Environment Testing Xenco

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	

eurofins | Environment Testing Xenco

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	

eurofins | Environment Testing Xenco

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	

eurofins | Environment Testing Xenco

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	

eurofins | Environment Testing Xenco

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	

eurofins | Environment Testing Xenco

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

QC Summary 671095

eurofins | Environment Testing Xenco

Terracon-Lubbock

Holstun 2nd Line Release

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3135772 — Matrix: Solid — Date Prep: 08.27.2020
MB Sample Id: 7710305-1-BLK — LCS Sample Id: 7710305-1-BKS — 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 — Prep Method: E300P
Seq Number: 3135774 — Matrix: Solid — Date Prep: 08.27.2020
MB Sample Id: 7710306-1-BLK — LCS Sample Id: 7710306-1-BKS — 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 — Prep Method: E300P
Seq Number: 3135772 — Matrix: Soil — Date Prep: 08.27.2020
Parent Sample Id: 671097-001 — MS Sample Id: 671097-001 S — 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 — Prep Method: E300P
Seq Number: 3135772 — Matrix: Soil — Date Prep: 08.27.2020
Parent Sample Id: 671138-002 — MS Sample Id: 671138-002 S — 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 — Prep Method: E300P
Seq Number: 3135774 — Matrix: Soil — Date Prep: 08.27.2020
Parent Sample Id: 671062-001 — MS Sample Id: 671062-001 S — 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 — Prep Method: E300P
Seq Number: 3135774 — Matrix: Soil — Date Prep: 08.27.2020
Parent Sample Id: 671095-008 — MS Sample Id: 671095-008 S — 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 — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

QC Summary 671095

eurofins | Environment Testing Xenco

Terracon-Lubbock

Holstun 2nd Line Release

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3135952 — Matrix: Solid — Date Prep: 08.28.2020
MB Sample Id: 7710463-1-BLK — LCS Sample Id: 7710463-1-BKS — 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 — Prep Method: SW8015P
Seq Number: 3135952 — Matrix: Solid — 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 — Prep Method: SW8015P
Seq Number: 3135952 — Matrix: Soil — 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 — Prep Method: SW5035A
Seq Number: 3135896 — Matrix: Solid — 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 [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference 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

QC Summary 671095

eurofins | Environment Testing Xenco

Terracon-Lubbock

Holstun 2nd Line Release

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3135899 Matrix: Solid 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** Prep Method: SW5035A
Seq Number: 3135907 Matrix: Solid 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** Prep Method: SW5035A
Seq Number: 3135899 Matrix: Soil 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 [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference 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

QC Summary 671095

eurofins | Environment Testing Xenco

Terracon-Lubbock

Holstun 2nd Line Release

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3135907 Matrix: Soil Date Prep: 08.29.2020
Parent Sample Id: 671095-004 MS Sample Id: 671095-004 S 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** Prep Method: SW5035A
Seq Number: 3135896 Matrix: Soil Date Prep: 08.28.2020
Parent Sample Id: 671103-003 MS Sample Id: 671103-003 S

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 [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference 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

CHAIN OF CUSTODY RECORD

Terracon

Laboratory: Xenco
Address: 6701 Aberdeen
Lubbock, Texas 79424

Office Location: Lubbock
Phone:
Contact: J. Guesnier 806-544-9276
Project Manager: J. Guesnier
SRS #:
Sampler's Name: J. Guesnier
Sampler's Signature

Project Number: AR207089
Project Name: Holstun 2nd line release

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 4 oz Glass	40 ml VOA	60 ml VOA	5035 kit	Chloride (EPA Method 300)	TPH Extended 8015	BTEX (EPA Method 8021B)	Hold				Lab Sample ID
S	8/23/2020	12:00	X		NW - (3.5-4)	3.5	4	X				X	X	X					671095-001
S	8/23/2020	12:05	X		SW - (3.5-4)	3.5	4	X				X	X	X					-002
S	8/23/2020	12:10	X		WW - (3.5-4)	3.5	4	X				X	X	X					-003
S	8/23/2020	12:15	X		EW - (3.5-4)	3.5	4	X				X	X	X					-004
S	8/23/2020	12:20	X		NF - (7.5-8)	7.5	8	X				X	X	X					-005
S	8/23/2020	12:25	X		SF - (7.5-8)	7.5	8	X				X	X	X					-006
S	8/23/2020	12:30	X		WF - (7.5-8)	7.5	8	X				X	X	X					-007
S	8/23/2020	12:35	X		EF - (7.5-8)	7.5	8	X				X	X	X					-008

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE:
TEMP OF COOLER WHEN RECEIVED (°C)

Page 1 of 1

TURNAROUND TIME ☑ Normal ☐ 48-Hour Rush ☐ 24-Hour Rush
TRRP Laboratory Review Checklist ☐ Yes ☐ No

	Date	Time		Date	Time
Relinquished by (Signature)	8-26-20	3:26	Received by (Signature)	8/26/20	15:26
Relinquished by (Signature)			Received by (Signature) -5.9-5.76		
Relinquished by (Signature)			Received by (Signature)		
Relinquished by (Signature)			Received by (Signature)		

NOTES: Client: Spur Energy Partners

e-mail results to:
bryant.mcbrayer@terracon.com
erin.loyd@terracon.com
jrguesnier@terracon.com

Matrix: WW-Wastewater; W - Water; S - Soil; L - Liquid; A - Air Bag; C - Charcoal tube; SL - Sludge
Container: VOA - 40 ml vial; A/G - Amber Glass 1L; 250 ml = Glass wide mouth; P/O - Plastic or other _____

Inter-Office Shipment

IOS Number : 69467

Date/Time: 08.26.2020
Lab# From: **Lubbock**
Lab# To: **Midland**
Created by: Michael J Turner
Delivery Priority:
Air Bill No.: 771369679724
Please send report to: Jessica Kramer
Address: 6701 Aberdeen, Suite 9 Lubbock, TX 79424
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 PHCC28C3	
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 PHCC28C3	
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 PHCC28C3	
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 PHCC28C3	
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 PHCC28C3	
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 PHCC28C3	
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 PHCC28C3	
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 PHCC28C3	

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

Eurofins Xenco, LLC

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

Brianna Teel

eurofins | Environment Testing Xenco

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

Jessica Kramer

eurofins | Environment Testing Xenco

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)

eurofins | Environment Testing Xenco

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,

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

eurofins | Environment Testing Xenco

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

eurofins | Environment Testing Xenco

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.

eurofins | Environment Testing Xenco

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:

Seq Number: 3145041 — Basis: Wet Weight

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:

Seq Number: 3145078 — Basis: Wet Weight

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	

eurofins | Environment Testing Xenco

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	

eurofins | Environment Testing Xenco

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:

Seq Number: 3145041 Basis: Wet Weight

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:

Seq Number: 3145078 Basis: Wet Weight

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	

eurofins | Environment Testing Xenco

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	

eurofins | Environment Testing Xenco

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:

Seq Number: 3145041 Basis: Wet Weight

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:

Seq Number: 3145078 Basis: Wet Weight

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	

eurofins | Environment Testing Xenco

Certificate of Analytical Results 680935

Terracon-Lubbock, Lubbock, TX

Holstun Line Release

Sample Id: **WW.1 - (3.5-4)**
Lab Sample Id: 680935-003

Matrix: Soil
Date Collected: 12.10.2020 14:10

Date Received: 12.11.2020 16:45
Sample Depth: 3.5 - 4 ft

Analytical Method: BTEX by EPA 8021B
Tech: MNR
Analyst: MNR
Seq Number: 3145007

Prep Method: SW5035A
Date Prep: 12.15.2020 10:00

% Moisture:
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	

eurofins | Environment Testing Xenco

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

eurofins | Environment Testing Xenco

QC Summary 680935

Terracon-Lubbock

Holstun Line Release

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3145041 — Matrix: Solid — Date Prep: 12.15.2020
MB Sample Id: 7717198-1-BLK — LCS Sample Id: 7717198-1-BKS — 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 — Prep Method: E300P
Seq Number: 3145041 — Matrix: Soil — Date Prep: 12.15.2020
Parent Sample Id: 680923-011 — MS Sample Id: 680923-011 S — 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 — Prep Method: E300P
Seq Number: 3145041 — Matrix: Soil — Date Prep: 12.15.2020
Parent Sample Id: 680935-001 — MS Sample Id: 680935-001 S — 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 — Prep Method: SW8015P
Seq Number: 3145078 — Matrix: Solid — Date Prep: 12.16.2020
MB Sample Id: 7717219-1-BLK — LCS Sample Id: 7717219-1-BKS — 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 — Prep Method: SW8015P
Seq Number: 3145078 — Matrix: Solid — Date Prep: 12.16.2020
MB Sample Id: 7717219-1-BLK

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 [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference 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

eurofins | Environment Testing Xenco

QC Summary 680935

Terracon-Lubbock

Holstun Line Release

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3145078 Matrix: Soil Date Prep: 12.16.2020
Parent Sample Id: 680913-001 MS Sample Id: 680913-001 S 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** Prep Method: SW5035A
Seq Number: 3145007 Matrix: Solid Date Prep: 12.15.2020
MB Sample Id: 7717200-1-BLK LCS Sample Id: 7717200-1-BKS 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** Prep Method: SW5035A
Seq Number: 3144975 Matrix: Solid Date Prep: 12.15.2020
MB Sample Id: 7717155-1-BLK LCS Sample Id: 7717155-1-BKS 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 [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference 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

QC Summary 680935

eurofins | Environment Testing Xenco

Terracon-Lubbock

Holstun Line Release

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3145007 Matrix: Soil Date Prep: 12.15.2020
Parent Sample Id: 680826-001 MS Sample Id: 680826-001 S 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** Prep Method: SW5035A
Seq Number: 3144975 Matrix: Soil Date Prep: 12.15.2020
Parent Sample Id: 680977-001 MS Sample Id: 680977-001 S 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 [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference 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

680935

CHAIN OF CUSTODY RECORD

Terracon

Laboratory: Xenco
Address: 6701 Aberdeen
Lubbock, Texas 79424

Office Location: Lubbock
Phone:
Project Manager: J. Guesnier
Contact: J. Guesnier 806-544-9276
Sampler's Name: B. Mcbrayer
SRS #:
Sampler's Signature

Project Number: AR207089
Project Name: Holstun Line Release

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE:
TEMP OF COOLER WHEN RECEIVED (°C): IR -4.8/-4.83

Page 1 of 1

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 4 oz Glass	40 ml VOA	60 ml VOA	5035 kit	Chloride (EPA Method 300)	TPH Extended 8015	BTEX (EPA Method 8021B)	Hold				Lab Sample ID
S	12/10/2020	14:00	X		NW.1 - (3.5-4)	3.5	4	X				X	X	X					
S	12/10/2020	14:05	X		SW.1 - (3.5-4)	3.5	4	X				X	X	X					
S	12/10/2020	14:10	X		WW.1 - (3.5-4)	3.5	4	X				X	X	X					

TURNAROUND TIME: ☐ Normal ☑ 48-Hour Rush ☐ 24-Hour Rush

TRRP Laboratory Review Checklist: ☐ Yes ☐ No

Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
	12-11-20	4:45	Holly Taylor	12/11/20	1645
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:

NOTES: Client: Spur Energy Partners

e-mail results to:
bryant.mcbrayer@terracon.com
erin.loyd@terracon.com
jrguesnier@terracon.com

Matrix: WW-Wastewater W - Water S - Soil L - Liquid A - Air Bag C - Charcoal tube SL - Sludge
Container: VOA - 40 ml vial A/G - Amber Glass 1L 250 ml = Glass wide mouth P/O - Plastic or other _____

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: Teddy Randall Lee
Randall Lee

Date Relinquished: 12.14.2020

Received By: Jessica Kramer
Jessica Kramer

Date Received: 12.16.2020

Cooler Temperature: 2.9

Eurofins Xenco, LLC

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 Date: 12.16.2020

Jessica Kramer

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
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	nRM2013950819
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 5, 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) 23	Volume Recovered (bbls) 18
	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 leak on a bad transition on the water line from booster pump at Aikman SWD to Holstun SWD. Hole in the bottom of a steel 3" transition, Area of spill was 60' X 25' in the pasture

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	nRM2013950819
District RP	
Facility ID	
Application ID	

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?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

Initial Response

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

☒ 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 not 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: Joseph Gresnier Title: Senior Staff Scientist

Signature: Date: 6-16-22

email: JRGresnier@Terracon.com Telephone: 806-544-9276

OCD Only

Received by: Date:

Form C-141
Page 3

State of New Mexico
Oil Conservation Division

Incident ID	nRM2013950819
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	250 (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: ***Each of the following items must be included in the report.***

- ☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☒ Field data
- ☒ Data table of soil contaminant concentration data
- ☒ Depth to water determination
- ☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- ☒ Boring or excavation logs
- ☒ Photographs including date and GIS information
- ☒ Topographic/Aerial maps
- ☒ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	nRM2013950819
District RP	
Facility ID	
Application ID	

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

Printed Name: Joseph Gresnier Title: Senior Staff Scientist

Signature: Joseph Gresnier Date: 6-16-22

email: JGresnier@Tetratech.com Telephone: 806-544-9276

OCD Only

Received by: Date:

Form C-141
Page 5

State of New Mexico
Oil Conservation Division

Incident ID	nRM2013950819
District RP	
Facility ID	
Application ID	

Remediation Plan

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

- [X] Detailed description of proposed remediation technique
- [X] Scaled sitemap with GPS coordinates showing delineation points
- [X] Estimated volume of material to be remediated
- [X] Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- [X] 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 Guenthier Title: Senior Staff Scientist

Signature: Joseph Guenthier Date: 6-16-22

email: JGuenthier@Ttemail.com Telephone: 806-544-9276

OCD Only

Received by: _____ Date: _____

- [ ] Approved
- [ ] Approved with Attached Conditions of Approval
- [ ] Denied
- [ ] Deferral Approved

Signature: _____ Date: _____

Form C-141
Page 6

State of New Mexico
Oil Conservation Division

Incident ID	nRM2013950819
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 Guevara Title: Senior Staff Scientist

Signature: [signature] Date: 6-16-22

email: JGuevara@Tetratech.com 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: _____

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 117961

CONDITIONS

Operator: Spur Energy Partners LLC 9655 Katy Freeway Houston, TX 77024	OGRID: 328947
	Action Number: 117961
	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 #NRM2013950819 HOLSTUN WATER LINE, thank you. This closure is approved.	10/24/2022