Form C-141
Page 6

State of New Mexico
Oil Conservation Division

Incident ID	NCE2002435751
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 Guesnier Title: Staff Scientist

Signature: Joseph Guesnier Date: 5-14-20

email: JRGuesnier@Tetratech.com Telephone: 886 544 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: ____________

Closure of Release Investigation and Remedial Action Plan

General Site Information:
Rock Daisy Road Release (NMOCD Reference #: NCE2002435751)

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
Tributary to North Seven Rivers (Northwest-Central Eddy County, NM), approximately 0.25 miles to the North

Driving Directions
From Hwy 285 head West on Rock Daisy Road for 4.57 miles. Site is on the North side of the road.

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

May 13, 2020
Terracon Project No. AR197270

Prepared for:
Spur Energy Partners
Houston, Texas

Prepared by:
Terracon Consultants, Inc.
Lubbock, Texas

May 13, 2020

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

Attn: Mr. Todd Mucha
P: 281-795-2286
E: todd@spurepllc.com

RE: **Closure of Release Investigation and Remedial Action Plan**
Rock Daisy Road Release
Unit G and J, Section 33, T26 South, R25 East, Eddy County, New Mexico
Eddy County, New Mexico
Terracon Project No. AR197270

Dear Mr. Mucha,

Terracon Consultants, Inc. (Terracon) is pleased to submit our Closure of Release Investigation and Remedial Action Plan (RAP) for the site referenced above. The Release Investigation and RAP 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 findings of the release investigation assessment, Terracon took the following actions to achieve protection of fresh water and the environment in accordance with NMOCD regulations. Terracon developed the Release Investigation and RAP and closure in general accordance with our proposal (PAR197270) dated July 20, 2019.

- Based on the magnitude of chloride and hydrocarbon concentrations detected within the release margins to depths subject to NMOCD Reclamation requirements, approximately 4,000 cubic yards (cy) of chloride impacted material will be required to be excavated and disposed of at a permitted disposal facility under manifest.
- Following excavation to restrictive layer depths, vertical and horizontal delineation samples will be 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).
- Based on the anticipated depth to groundwater and pending the confirmed vertical delineation, it is anticipated that a remedial response will not be warranted within the soils at depths greater than 5 ft. bgs.
- Terracon will backfill and 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 (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

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Unit G and J, Section 33, T26S, R25E
Eddy County, New Mexico
Terracon Project No. AR197270
May 13, 2020

1.0 SITE DESCRIPTION

The site is comprised of an approximate 0.50-acre produced water release, with the majority of the release residing on the pipeline right of way, and the remainder extending to the north into pasture land. The site is within the Unit Letters G and J, Section 33, Township 26 South, Range 25 East, Eddy County, New Mexico. The Rock Daisy Road release consists of rights-of-way for pipelines, and is at the intersection of a lease road and Rock Daisy Road. 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 release and develop a Remedial Action Plan (RAP) in accordance with the NMOCD requirements that detail site closure activities to be completed. This closure addresses the August 8, 2019 release of approximately 750 barrels (bbls) of produced water originating from an abandoned, unmarked buried poly line, which was struck by a roustabout crew excavating to gain access to a separate line, and the remediation activities that have taken place at the above referenced site.

3.0 INTRODUCTION AND NOTIFICATION

The following table provides detailed information regarding the August 8, 2019 produced water release at the Rock Daisy Road Release Site in Eddy County, New Mexico:

Required Information	Site and Release information	
Responsible party Local contact	Spur Energy Partners LLC	
	Contact:Mr. Todd Mucha	P: (281) 795-2286 E: todd@spurepllc.com
NMOCD Notification	Notice of the release was provided to the NMOCD District 2 Artesia Office by Todd Mucha (Spur) on August 9, 2019.	

Required Information	Site and Release information	
Facility description	The Rock Daisy Road Release is in Eddy County, New Mexico. It is an approximate 0.5-acre area located within Unit G and J, Section 33, T26 South, R25 East, approximately 3.9 miles northwest of Seven Rivers, New Mexico. The site is being developed as a pipeline easement thoroughfair.	
Time of incident	August 8, 2019, discovered at 11:00 a.m.	
Discharge event	A legacy tie-in to the Spur SWD system from a Mewborn battery failed inside of the vertical access point. Specifically, the steel valve had corroded through. The site was excavated in order to remediate the leak and cap the abandoned line as well as tie in the active line. The fluid that released to ground was before the excavation was completed to access the line. Vacum trucks were utilized in the open excavation to recover all remaining fluids.	
Type of discharge	The documented fluids release occurred at the pipeline and affected the surface and appears to be to depth.	
Quantity of spilled material	Total Fluids: 750 bbls	Produced Water: 750 bbls
Site characteristics	Relatively flat with drainage following the native ground surface; very gently sloping to the east.	
Immediate corrective actions	Pipeline was shut in, and the pump along with the corroded valve was 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 capping the corroded valve in the pipeline that failed. Spur enlisted Terracon to assess the impacted areas resulting from the release and develop a remediation plan of action.

4.2 Containment and Site Stabilization

Site stabilization and containment were achieved by the Spur foreman who enlisted the roustabout crew to enlarge the open excavation to allow access to repair the corroded valve, and then fence off the open excavation. The Spur foreman then enlisted a vacuum truck contractor to remove all standing liquid from the excavation

5.0 GENERAL SITE CHARACTERISTICS

5.1 Depth to Groundwater

A water well record search of the New Mexico Office of the State Engineer (NMOSE) Potable Water Well (POD) Geographic Information System (GIS) data portal identified no registered wells within 0.5 miles of the site. One registered well (POD # RA-08980) was identified at 1.71 miles of the site with a stated depth of 250 ft. below grade surface (bgs). NMOSE registered wells within 3.25 miles of the site have a minimum depth to groundwater of 173 feet bgs, with a maximum reported depth of 250 feet bgs. Based on the review of NMOSE available documentation, the depth to groundwater at the site is anticipated to be deeper than 100 feet bgs.

5.2 Distance to Nearest Potable Water Well

Based on review of the NMOSE database, registered potable water wells were not present within 0.5 miles of the site.

5.3 Distance to Nearest Surface Water

A tributary to North Seven Rivers is located approximately 0.25 miles to the north of the site.

5.4 Soil / Waste Characteristics

Soils at the site are mapped as Reagan-Upton association, 0 to 3 percent slopes, 0 to 60 inches loam. This soil has a surface layer of gravelly sand. Restrictive features, are present at more than 80 inches bgs resulting in the formation being categorized with a low runoff classification.

5.5 Karst Characteristics

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 is of low potential. The site has a layer of solid competent rock at 80 inches bgs. The full extent of release quantities and excavation activities are not anticipated to be advanced greater than 60 inches bgs.

5.6 Groundwater Quality

Groundwater at the site is predominantly used for commercial oil and gas production and the nearest well (POD # RA-08980) is being utilized for Industrial operations.

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 detail applicability of these guidance documents to the site-specific characteristics associated with the Rock Daisy Road Release.

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:

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****
<u><</u>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*

Based on the site-specific characteristics, the applicable NMOCD remediation levels for Total BTEX, chloride, and TPH within soils, at all depths are as follows:

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

7.0 SOIL SAMPLING PROCEDURES

Soil sampling procedures are detailed as follows:

7.1 Soil Sampling Procedures for Laboratory Analysis

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 utilized 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

8.0 RELEASE INVESTIGATION DATA EVALUATION

During Terracon's August 14, 2019 release investigation activities, a total of 29 soil samples were collected from the site and analyzed for BTEX, chloride, and/or TPH. Of the 29 soil samples collected, 28 samples were collected from within the release margins and one sample was collected from the stockpiled soils.

8.1 Release Margins Data Evaluation

8.1.1 Reclamation Assessment Data Evaluation

Benzene was not detected above applicable laboratory SDLs in the soil samples analyzed within the release margins. The laboratory SDLs for benzene did not exceed the applicable NMOCD RAL for benzene of 10 mg/kg, as summarized in Table 2.

Total BTEX was detected above applicable laboratory SDLs in six of the 29 soil samples analyzed within the release margins. The detected Total BTEX concentrations ranged from 0.00588 mg/kg and soil sample SP-1 (Surface to 0.5 ft bgs) to 0.184 mg/kg in soil sample HA-7 (1.5 – 2 ft bgs.) The detected Total BTEX did not exceed the applicable NMOCD RAL for Total BTEX of 50 mg/kg, as summarized in Table 2.

Chloride was detected above applicable laboratory SDLs in each of the 29 soil samples analyzed within the release margins. The chloride concentrations ranged from 77.2 mg/kg in soil sample HA-7 (1.5 to 2 ft bgs) to 10,600 mg/kg in soil sample HA-2 (Surface to 0.5 ft bgs). Twenty two of 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 2.

Total TPH was detected above applicable laboratory SDLs in 9 of the 29 soil samples analyzed. The Total TPH concentrations ranged from 10.2 mg/kg in soil sample HA-2 (3.5 to 4.0 ft bgs) to 432 mg/kg in soil sample SP-1 (surface to 0.5 ft bgs). The stockpile was the sole soil sample collected that exhibited Total TPH concentrations above the NMOCD RAL of 100 mg/kg for Total TPH, as summarized in Table 2.

8.1.2 Remediation Assessment Data Evaluation

During Terracon's December 05, 2019 remedial investigation activities, a total of 10 soil samples were collected from the site and analyzed for BTEX, chloride, and/or TPH. Of the 10 soil samples collected, 10 samples were collected from within the release margins.

8.1.3 Remediation Assessment Data Evaluation

Benzene was not detected above applicable laboratory SDLs in the soil samples analyzed within the release margins. The laboratory SDLs for benzene did not exceed the applicable NMOCD RAL for benzene of 10 mg/kg, as summarized in Table 2.

Total BTEX was detected above applicable laboratory SDLs in each of the 10 soil samples analyzed within the release margins. The detected Total BTEX concentrations ranged from 0.00990 mg/kg and soil sample SF (5.5 ft bgs to 6 ft bgs) to 0.0172 mg/kg in soil sample SW 4 (surface to 0.5 ft bgs.) The detected Total BTEX did not exceed the applicable NMOCD RAL for Total BTEX of 50 mg/kg, as summarized in Table 2.

Chloride was detected above applicable laboratory SDLs in each of the 10 soil samples analyzed within the release margins. The chloride concentrations ranged from 69.7 mg/kg in soil sample SW 3 (surface to 0.5 ft bgs) to 3,640 mg/kg in soil sample NW 3 (Surface to 0.5 ft bgs). Two of 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 2.

Total TPH was detected above applicable laboratory SDLs in 4 of the 10 soil samples analyzed. The Total TPH concentrations ranged from 0.267 mg/kg in soil sample NW 1 (surface to 0.5 ft bgs) to 25.1 mg/kg in soil sample SW 2 (surface to 0.5 ft bgs). The detected Total TPH did not exceed the applicable NMOCD RAL of 100 mg/kg for Total TPH, as summarized in Table 2.

8.2 Release Investigation Data Summary

Based on the review of the above release investigation analytical results, the areas within the release margins exhibit concentrations of chloride in multiple locations and Total TPH in in the stockpile (SP-1). Based on these exceedances above NMOCD RALs, Sections 9.0 and subsequent detail recommended remedial response actions to be implemented at the 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 competent rock, further analytical evaluation of deeper horizons appears unwarranted at this time.

8.3 Confirmation Margins Data Evaluation

During Terracon's six confirmation sampling events from October 21, 2019, to February 4, 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 42 total soil samples were collected from the site and analyzed for BTEX, chloride and/or TPH.

8.3.1 Confirmation Assessment Data Evaluation

Benzene was not detected above the applicable laboratory SDL in the confirmation soil samples. Benzene concentration did not exceed the applicable NMOCD RAL for benzene of 10 mg/kg, as summarized in Table 2.

Total BTEX was detected above applicable laboratory SDLs in 11 of the 42 soil samples analyzed within the release margins. The Total BTEX concentrations ranged from 0.00945 mg/kg in soil sample CS-2.1 (2 ft bgs to 2.5 ft bgs) to 0.0172 mg/kg in soil sample SW-4 (surface to 0.5 ft bgs). The detected Total BTEX concentrations did not exceed the applicable NMOCD RAL for BTEX of 50 mg/kg, as summarized in Table 2.

Chloride was detected above applicable laboratory SDLs in each of the analyzed confirmation samples. The chloride concentrations ranged from 24.1 mg/kg in soil sample CS-2.2 (2 ft bgs to 2.5 ft bgs) to 3,640 mg/kg in soil sample NW-3 (surface to 0.5 ft bgs). A few of the detected chloride concentrations did exceed the applicable NMOCD RAL of 600 mg/kg for chloride in the first four sampling events, the subsequent sampling event on January 28, 2020, only resulted in two samples that were over the applicable NMOCD RAL of 600 mg/kg. The final sampling event on February 4, 2020 confirmed all concentrations were below the NMOCD RALs. The initial soil samples at NW-1 and NW-1.1 (surface to 0.5 ft bgs), and WW-1 (surface to 0.5 ft bgs), and NW-3 (surface to 0.5 ft bgs) were all over NMOCD RAL of 600 mg/kg, but subsequent sampling following additional remedial efforts resulted in all concentrations for these locations to fall under the NMOCD RAL of 600 mg/kg, as summarized in Table 2.

Total TPH was detected above applicable laboratory SDLs in 15 of the 42 soil samples analyzed within the release margins. The Total TPH concentrations ranged from 0.267 mg/kg in soil sample NW-1 (surface to 0.5 ft bgs) to 310 mg/kg in soil sample CS-6.0 (surface to 0.5 ft bgs). The detected Total TPH concentrations did exceed the applicable NMOCD RAL for Total TPH of 100 mg/kg, subsequent sampling following additional remedial efforts resulted in all concentrations to fall under the NMOCD RAL of 600 mg/kg, as summarized in Table 2.

8.3.2 Confirmation Data Summary

Based on the review of the above confirmation analytical results, the areas surrounding the remediation margins do not exhibit concentrations above NMOCD RAL for benzene, Total BTEX, chloride and Total TPH. Based on these results below NMOCD RALs, Sections 9.0 and subsequent detail recommended closure of response actions to be implemented at the site. Terracon recommend the restoration of the above mentioned site on March 1, 2020.

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 5,000 cy of chloride impacted material were excavated and disposed of at a permitted disposal facility under manifest.

9.2 Remediation Response Objectives

Following excavation to recommended Reclamation depths, horizontal and vertical delineation composite samples were collected from the base and walls of the excavation that confirmed the remaining levels of soil contaminants are below the desired NMOCD RALs. Based on the proximity of the analyzed samples to this restrictive layer and the magnitude of the concentrations being elevated above 600 mg/kg, Terracon previously recommended hydro excavating the restrictive feature to wash out the residual presence of chlorides at this restrictive zone to ensure that concentrations are not elevated further at this restrictive interphase. However, Terracon did not encounter significant restrictive features during the remediation activities on site, and Hydro excavation was not warranted to complete the remediation.

Based on the anticipated depth to groundwater, and considering the possibility of Karst formations it is anticipated that no additional remedial response will be warranted within the soils at depths not effected by the release.

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 have 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 to ensure that any remaining contaminants will not pose a threat to present or foreseeable beneficial use of fresh water, the public health and the environment.

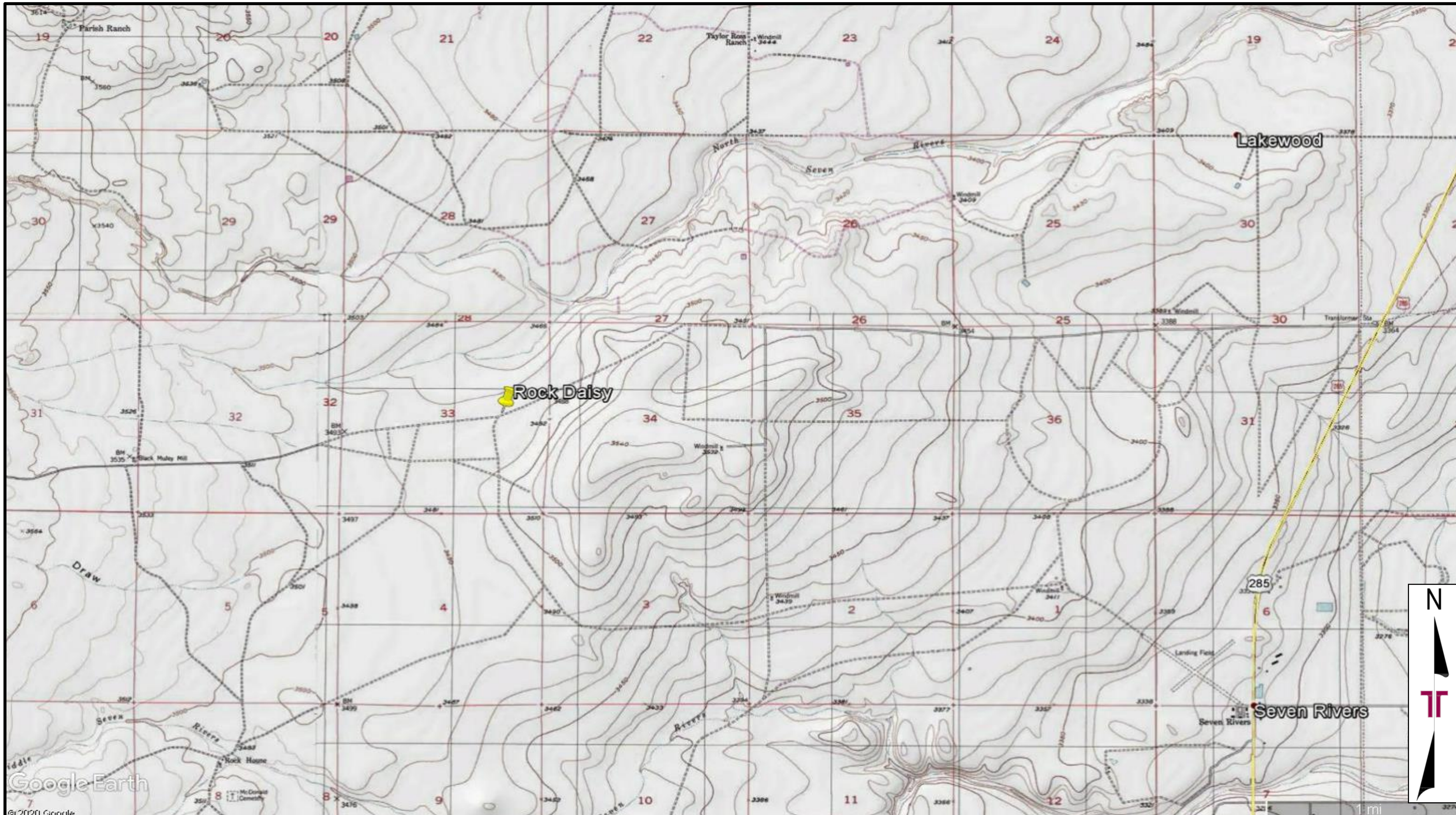
10.2 Final Closure

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



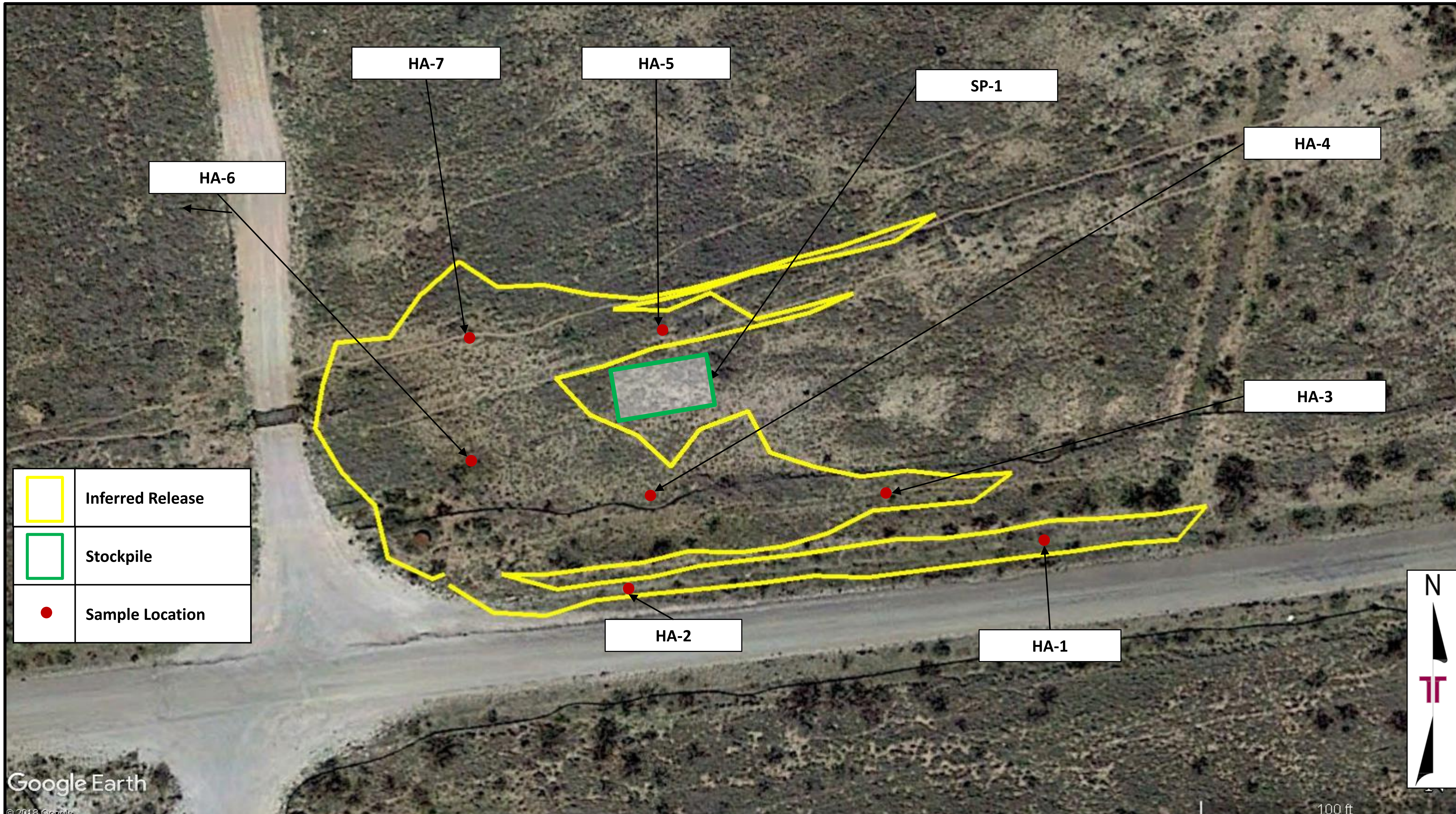
Project No.	AR197270
Scale:	As Shown
Source:	Google Earth
Date:	2016

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

Figure 1 – Topo Map

Rock Daisy Road Release
32.617066°, -104.486885°

Unit G, S33, T26S, R25E
Eddy County, New Mexico



Project No.	AR197270
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Source:	Google Earth
Image Date:	7/15/2019

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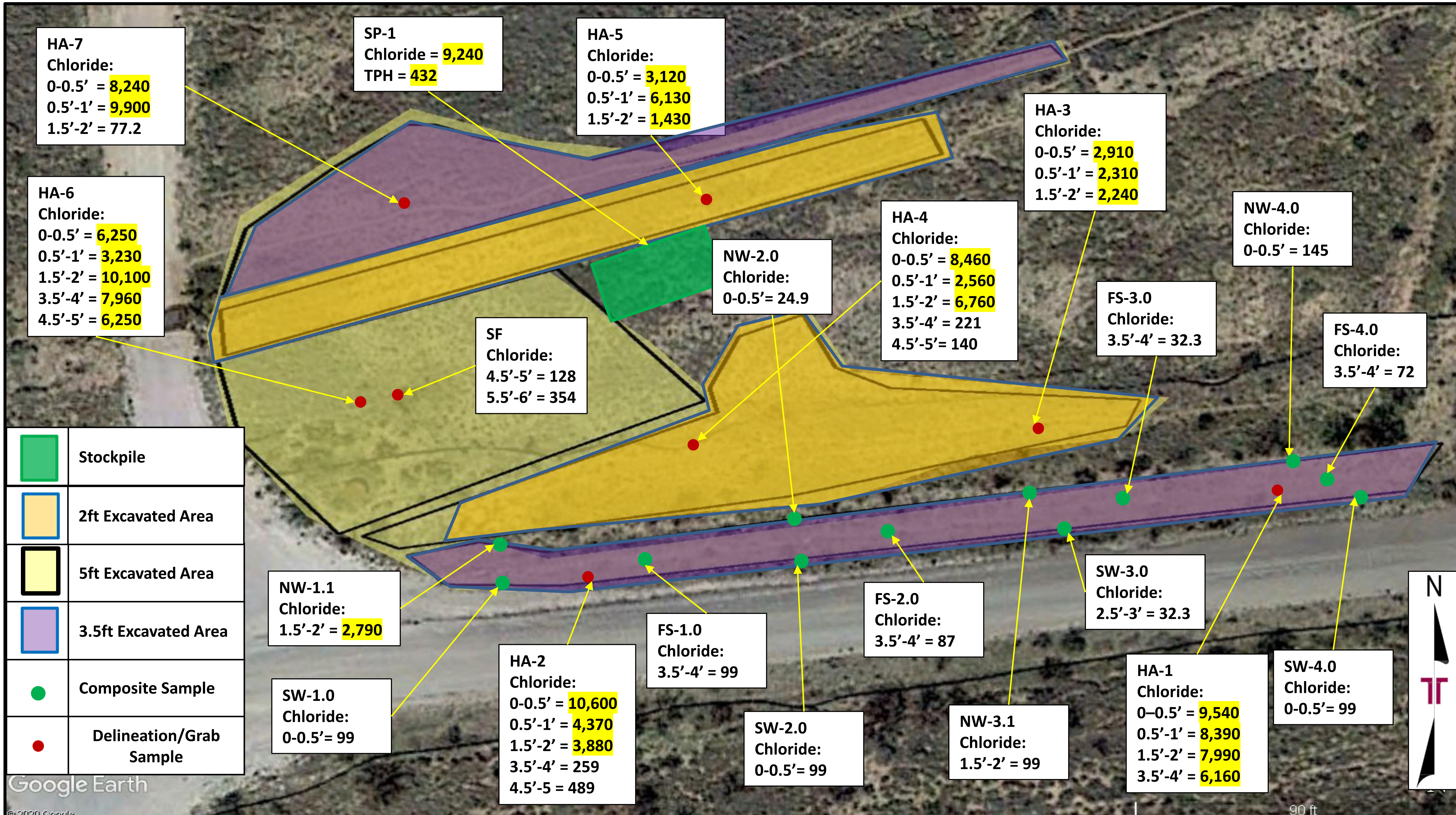
Figure 2 – Site Map

Rock Daisy Road Release
32.617066°, -104.486885°

Unit G, S33, T26S, R25E
Eddy County, New Mexico



Project No.	AR197270
Scale:	As Shown
Source:	Google Earth
Image Date:	7/15/2019

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5827 50th St. Suite 1 Lubbock, Texas 79424
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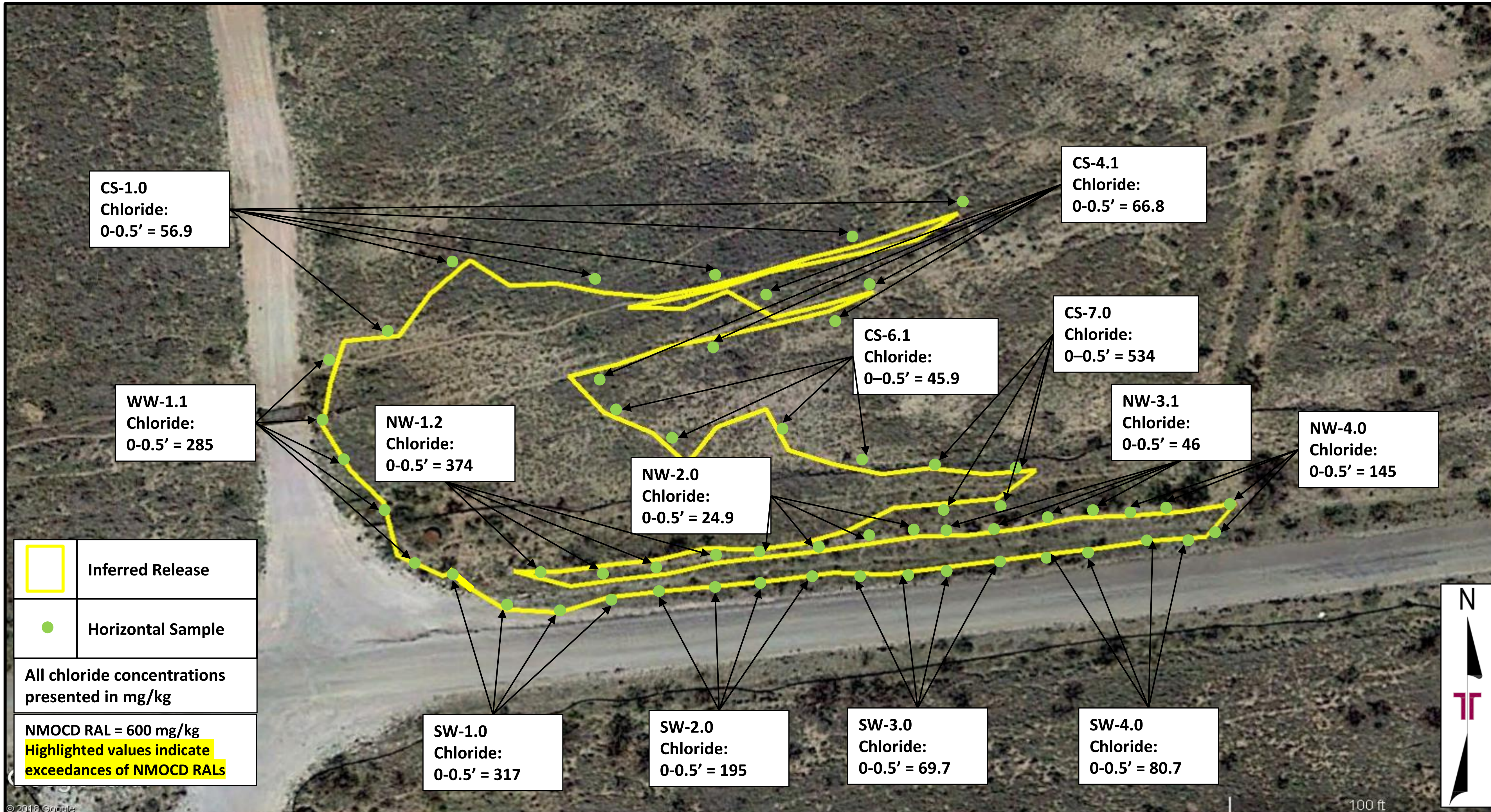
Figure 3 – Excavation Site Map

Rock Daisy Road Release
32.617066°, -104.486885°

Unit G, S33, T26S, R25E
Eddy County, New Mexico



Project No.	AR197270
Scale:	As Shown
Source:	Google Earth
Image Date:	7/15/2019

Terracon
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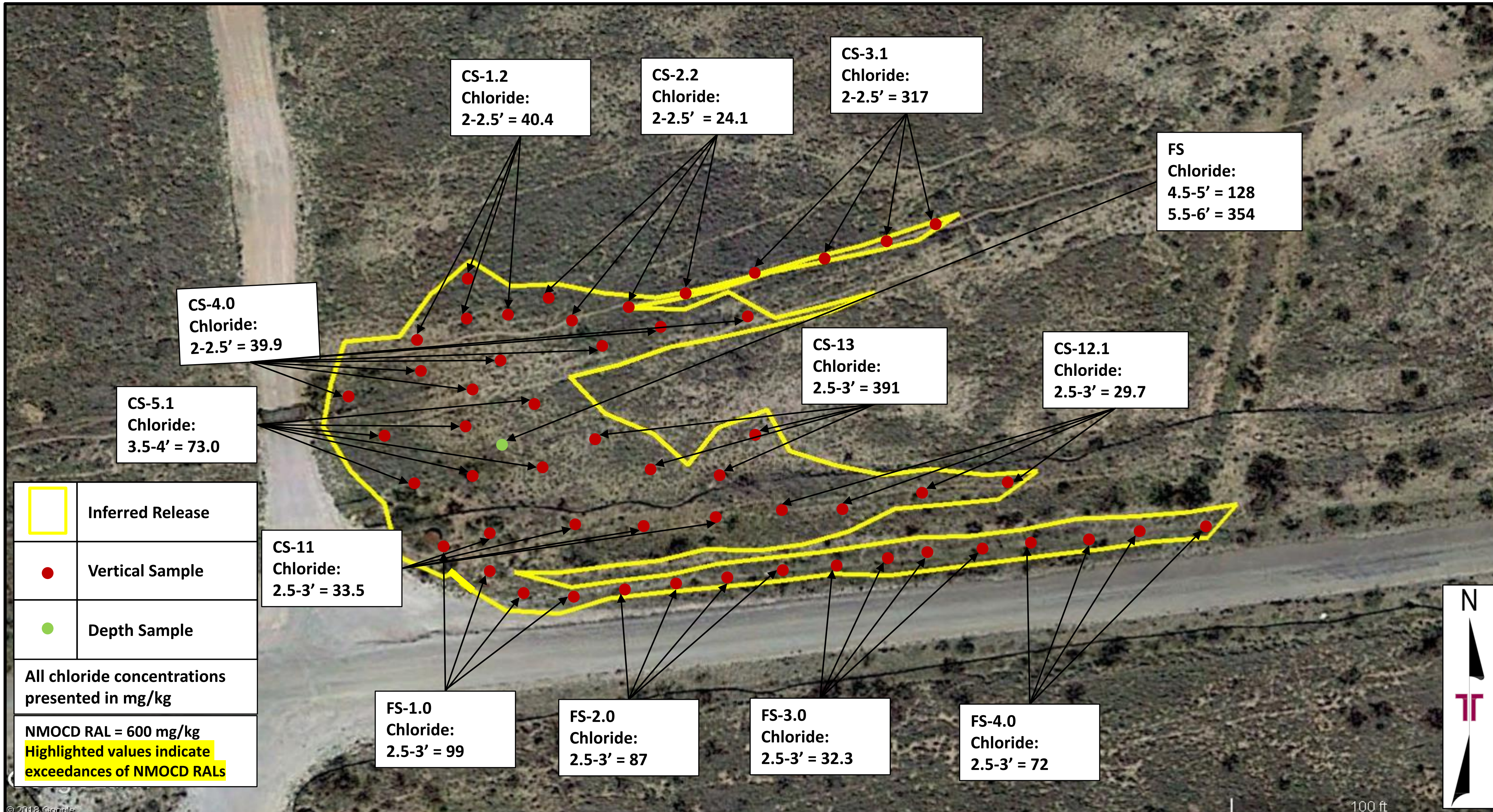
Figure 4 – Confirmation Concentration Horizontal Map

Rock Daisy Road Release
32.617066°, -104.486885°

Unit G, S33, T26S, R25E
Eddy County, New Mexico



Project No.	AR197270
Scale:	As Shown
Source:	Google Earth
Image Date:	7/15/2019

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Figure 5 – Confirmation Concentration Vertical Map

Rock Daisy Road Release
32.617066°, -104.486885°

Unit G, S33, T26S, R25E
Eddy County, New Mexico

Figure 6 - NMOSE POD Location Map

11/20/2019 11:19:08 AM

OSE District Boundary

1:36,112

0 0.35 0.7 1.4 mi

0 0.5 1 2 km

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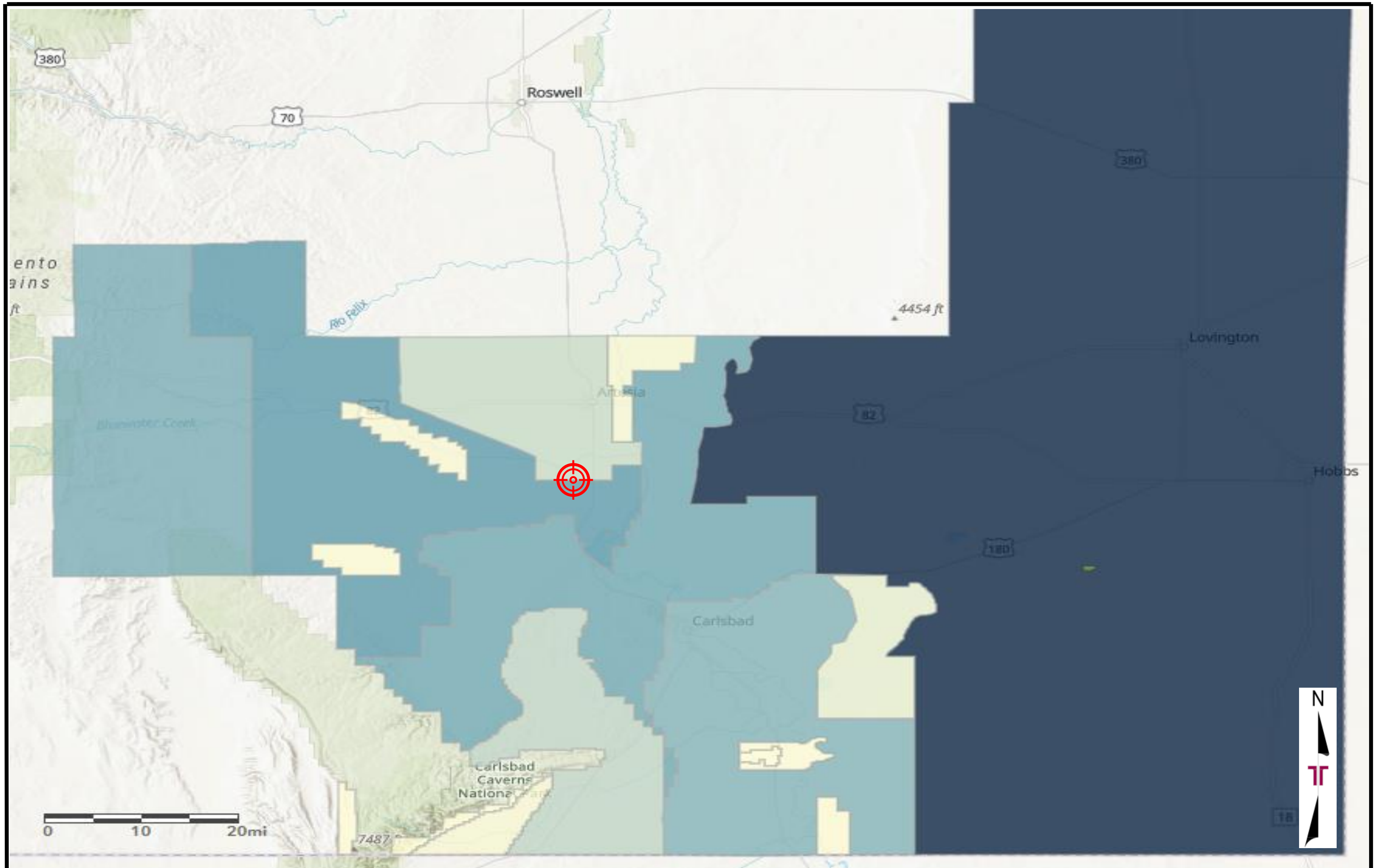
Printed from Public Web Map
Unofficial Map from OSE POD Locations Web Application



Area
> 4,639,520,691
2,329,282,660
< 19,044,631

Rock Daisy Road Release

Project No.	AR197270
Scale:	As Shown
Source:	ESRI
Date:	09/26/2019

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

Rock Daisy Road Release
32.617066°, -104.486885°

Unit G, S33, T26S, R25E
Eddy County, New Mexico

TABLE 2
SOIL SAMPLE ANALYTICAL RESULTS - BTEX[1], Chloride[2], and TPH[3]
Rock Daisy Road Line Release
Terracon Project No. AR197270

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
Release Margin Samples (Off Pad)									
HA-1	0 - 0.5	Grab	08/14/19	Benzene - <0.00790 Toluene - <0.00409 Ethylbenzene - <0.00538 Total Xylenes - 0.0245 Total BTEX - 0.0245	**9,540**	<9.92	<9.92	<9.92	<9.92
	0.5 - 1	Grab	08/14/19	Benzene - <0.00848 Toluene - <0.00439 Ethylbenzene - <0.00578 Total Xylenes - <0.00640 Total BTEX - <0.00439	**8,390**	<9.93	12.6	<9.93	12.6
	1.5 - 2	Grab	08/14/19	Benzene - <0.00806 Toluene - <0.00417 Ethylbenzene - <0.00549 Total Xylenes - <0.00608 Total BTEX - <0.00417	**7,990**	<9.97	<9.97	<9.97	<9.97
	3.5 - 4	Grab	08/14/19	BTEX - NA	**6,160**	12.2	20.5	19.3	52.0
	4.5 - 5	Grab	NA	BTEX - NA	NA	NA			
HA-2	0 - 0.5	Grab	08/14/19	Benzene - <0.00842 Toluene - <0.00436 Ethylbenzene - <0.00574 Total Xylenes - 0.013 Total BTEX - 0.013	**10,600**	<9.96	25.1	<9.96	25.1
	0.5 - 1	Grab	08/14/19	Benzene - <0.00803 Toluene - <0.00416 Ethylbenzene - <0.00547 Total Xylenes - <0.00606 Total BTEX - <0.00416	**4,370**	<10	<10	<10	<10
	1.5 - 2	Grab	08/14/19	Benzene - <0.00878 Toluene - <0.00454 Ethylbenzene - <0.00598 Total Xylenes - <0.00662 Total BTEX - <0.00454	**3,880**	<9.99	<9.99	<9.99	<9.99
	3.5 - 4	Grab	08/14/19	BTEX - NA	259	10.2	<10.0	<10.0	10.2
	4.5 - 5	Grab	08/14/19	BTEX - NA	489	NA			
Release Margin Samples (Off Pad)									
HA-3	0 - 0.5	Grab	08/14/19	Benzene - <0.00822 Toluene - <0.00425 Ethylbenzene - <0.00560 Total Xylenes - <0.00620 Total BTEX - <0.00425	**2,910**	<9.98	<9.98	<9.98	<9.98
	0.5 - 1	Grab	08/14/19	Benzene - <0.00899 Toluene - <0.00465 Ethylbenzene - <0.00612 Total Xylenes - <0.00678 Total BTEX - <0.00465	**2,310**	<9.97	<9.97	<9.97	<9.97
	1.5 - 2	Grab	08/14/19	Benzene - <0.00892 Toluene - <0.00462 Ethylbenzene - <0.00607 Total Xylenes - <0.00673 Total BTEX - <0.00462	**2,240**	<9.97	<9.97	<9.97	<9.97
	3.5 - 4	Grab	NA	BTEX - NA	NA	NA			
	4.5 - 5	Grab	NA	BTEX - NA	NA	NA			
HA-4	0 - 0.5	Grab	08/14/19	Benzene - <0.00856 Toluene - <0.00443 Ethylbenzene - <0.00583 Total Xylenes - <0.00646 Total BTEX - <0.00443	**8,460**	<10	<10	<10	<10
	0.5 - 1	Grab	08/14/19	Benzene - <0.00853 Toluene - <0.00442 Ethylbenzene - <0.00581 Total Xylenes - <0.00643 Total BTEX - <0.00442	**2,560**	<9.92	<9.92	<9.92	<9.92
	1.5 - 2	Grab	08/14/19	Benzene - <0.00843 Toluene - <0.00437 Ethylbenzene - <0.00575 Total Xylenes - <0.00636 Total BTEX - <0.00437	**6,760**	<9.95	<9.95	<9.95	<9.95
	3.5 - 4	Grab	08/14/19	BTEX - NA	221	10.8	<9.99	<9.99	10.8
	4.5 - 5	Grab	08/14/19	BTEX - NA	140	NA			
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**	**600**	**N/A**			**100**

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]
Rock Daisy Road Line Release
Terracon Project No. AR197270

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
Release Margin Samples (Off Pad)									
HA-5	0 - 0.5	Grab	08/14/19	Benzene - <0.00866 Toluene - <0.00448 Ethylbenzene - <0.00590 Total Xylenes - <0.00653 Total BTEX - <0.00448	**3,120**	<9.96	<9.96	<9.96	<9.96
HA-5	0.5 - 1	Grab	08/14/19	Benzene - <0.0878 Toluene - <0.00454 Ethylbenzene - <0.00598 Total Xylenes - <0.00662 Total BTEX - <0.00454	**6,130**	<9.90	<9.90	<9.90	<9.90
HA-5	1.5 - 2	Grab	08/14/19	Benzene - <0.00825 Toluene - <0.00427 Ethylbenzene - <0.00562 Total Xylenes - <0.00622 Total BTEX - <0.00427	**1,430**	<9.95	<9.95	<9.95	<9.95
HA-5	3.5 - 4	Grab	NA	BTEX - NA	NA	NA			
HA-5	4.5 - 5	Grab	NA	BTEX - NA	NA	NA			
HA-6	0 - 0.5	Grab	08/14/19	Benzene - <0.00842 Toluene - <0.00436 Ethylbenzene - <0.00574 Total Xylenes - 0.013 Total BTEX - 0.013	**6,250**	10.9	14	<9.94	24.9
HA-6	0.5 - 1	Grab	08/14/19	Benzene - <0.00893 Toluene - <0.00462 Ethylbenzene - <0.00609 Total Xylenes - 0.0178 Total BTEX - 0.0178	**3,230**	<9.95	<9.95	<9.95	<9.95
HA-6	1.5 - 2	Grab	08/14/19	Benzene - <0.0883 Toluene - <0.00457 Ethylbenzene - <0.00602 Total Xylenes - <0.00666 Total BTEX - <0.00457	**10,100**	11.1	21.2	<9.99	32.3
HA-6	3.5 - 4	Grab	08/14/19	BTEX - NA	**7,960**	<9.97	<9.97	<9.97	<9.97
HA-6	4.5 - 5	Grab	08/14/19	BTEX - NA	**6,250**	NA			
Release Margin Samples (Off Pad)									
HA-7	0 - 0.5	Grab	08/14/19	Benzene - <0.00893 Toluene - <0.00462 Ethylbenzene - <0.00609 Total Xylenes - <0.00674 Total BTEX - <0.00462	**8,240**	<9.94	<9.94	<9.94	<9.94
HA-7	0.5 - 1	Grab	08/14/19	Benzene - <0.00826 Toluene - <0.00428 Ethylbenzene - <0.00563 Total Xylenes - <0.00623 Total BTEX - <0.00428	**9,990**	<10	13.5	<10	13.5
HA-7	1.5 - 2	Grab	08/14/19	Benzene - <0.00832 Toluene - 0.0331 Ethylbenzene - 0.0552 Total Xylenes - 0.0957 Total BTEX - 0.184	77.2	<9.94	<9.94	<9.94	<9.94
HA-7	3.5 - 4	Grab	NA	BTEX - NA	NA	NA			
HA-7	4.5 - 5	Grab	NA	BTEX - NA	NA	NA			
SP-1	0 - 0.5	Grab	08/14/19	Benzene - <0.00886 Toluene - 0.00588 Ethylbenzene - <0.00604 Total Xylenes - <0.00669 Total BTEX - 0.00588	**9,240**	51.6	331	49	**432**
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**	**600**	**N/A**			**100**

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

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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]
Rock Daisy Road Line Release
Terracon Project No. AR197270

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									
CS-1.0	0-0.5	Comp	10/21/19	Benzene - <0.00900 Toluene - <0.00466 Ethylbenzene - <0.00614 Total Xylenes - <0.00679 Total BTEX - <0.00466	56.9	<9.91	<9.91	<9.91	<9.91
CS-2.0	2-2.5	Comp	10/21/19	Benzene - <0.00885 Toluene - <0.00458 Ethylbenzene - <0.00603 Total Xylenes - <0.00667 Total BTEX - <0.00458	**1,220**	<9.96	<9.96	<9.96	<9.96
CS-3.0	0-0.5	Comp	10/21/19	Benzene - <0.00807 Toluene - <0.00418 Ethylbenzene - <0.00550 Total Xylenes - <0.00609 Total BTEX - <0.00418	**759**	<9.97	<9.97	<9.97	<9.97
CS-4.0	2-2.5	Comp	10/21/19	Benzene - <0.00873 Toluene - <0.00452 Ethylbenzene - <0.00595 Total Xylenes - <0.00658 Total BTEX - <0.00452	39.3	<9.94	<9.94	<9.94	<9.94
CS-6.0	0-0.5	Comp	11/12/19	Benzene - <0.00859 Toluene - <0.00445 Ethylbenzene - <0.00586 Total Xylenes - <0.00648 Total BTEX - <0.00445	**1,810**	<2.48	174	136	**310**
CS-7.0	0-0.5	Comp	11/12/19	Benzene - <0.00800 Toluene - <0.00414 Ethylbenzene - <0.00545 Total Xylenes - <0.00604 Total BTEX - <0.00414	534	<2.51	2.84	9.74	12.58
CS-8.0	0-0.5	Comp	11/12/19	Benzene - <0.00799 Toluene - <0.00413 Ethylbenzene - <0.00544 Total Xylenes - <0.00602 Total BTEX - <0.00413	**3,420**	<2.49	<2.66	8.89	8.89
CS-9.0	0-0.5	Comp	11/12/19	Benzene - <0.00786 Toluene - <0.00407 Ethylbenzene - <0.00536 Total Xylenes - <0.00593 Total BTEX - <0.00407	**1,780**	<2.49	12.7	17.4	30.1
CS-10.0	0-0.5	Comp	11/12/19	Benzene - <0.00853 Toluene - <0.00442 Ethylbenzene - <0.00581 Total Xylenes - <0.00643 Total BTEX - <0.00442	**2,490**	<2.49	4.04	9.61	13.7
CS-11.0	2.5-3	Comp	11/12/19	Benzene - <0.00899 Toluene - <0.00465 Ethylbenzene - <0.00612 Total Xylenes - <0.00678 Total BTEX - <0.00465	**938**	<2.50	2.95	6.91	9.86
CS-1.1	2-2.5	Comp	11/12/19	Benzene - <0.00878 Toluene - <0.00454 Ethylbenzene - <0.00598 Total Xylenes - <0.00662 Total BTEX - <0.00454	**1,080**	<0.263	<7.45	<7.45	<0.263
CS-2.1	2-2.5	Comp	11/12/19	Benzene - <0.00854 Toluene - 0.00945 Ethylbenzene - <0.00582 Total Xylenes - <0.00645 Total BTEX - 0.00945	**2,970**	<0.256	<7.55	<7.55	<0.256
CS-3.1	2-2.5	Comp	11/12/19	Benzene - <0.00893 Toluene - <0.00462 Ethylbenzene - <0.00609 Total Xylenes - <0.00674 Total BTEX - <0.00462	317	<0.268	<7.52	<7.52	<0.268
CS-4.1	2-2.5	Comp	11/12/19	Benzene - <0.00853 Toluene - <0.00442 Ethylbenzene - <0.00581 Total Xylenes - <0.00643 Total BTEX - <0.00442	66.8	<0.256	66.8	<7.44	66.8
CS-12	2.5-3	Comp	11/12/19	Benzene - <0.00793 Toluene - <0.00411 Ethylbenzene - <0.00540 Total Xylenes - <0.00598 Total BTEX - <0.00411	**2,330**	<2.51	4.5	8.62	13.1
CS-13	2.5-3	Comp	11/12/19	Benzene - <0.00811 Toluene - <0.00456 Ethylbenzene - <0.00600 Total Xylenes - <0.00665 Total BTEX - <0.00456	391	<2.48	3.61	6.15	9.76
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**	**600**	**N/A**			**100**

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
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TABLE 2
SOIL SAMPLE ANALYTICAL RESULTS - BTEX[1], Chloride[2], and TPH[3]
Rock Daisy Road Line Release
Terracon Project No. AR197270

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									
SF	4.5-5	Grab	12/05/19	Benzene - <0.00902 Toluene - 0.016 Ethylbenzene - <0.00615 Total Xylenes - <0.00681 Total BTEX - 0.016	128	<0.270	<7.52	<7.52	<0.270
SF	5-5-6	Grab	12/05/19	Benzene - <0.00895 Toluene - 0.0099 Ethylbenzene - <0.00610 Total Xylenes - <0.00675 Total BTEX - 0.0099	354	0.281	<7.47	<7.47	0.281
NW - 1	0-.5	Comp	12/05/19	Benzene - <0.00868 Toluene - 0.0115 Ethylbenzene - <0.00591 Total Xylenes - <0.00655 Total BTEX - 0.0115	**3,100**	0.267	<7.52	<7.52	0.267
NW - 2	0-.5	Comp	12/05/19	Benzene - <0.00879 Toluene - 0.0156 Ethylbenzene - <0.00599 Total Xylenes - <0.00663 Total BTEX - 0.0156	24.9	0.284	<7.53	<7.53	0.284
NW - 3	0-.5	Comp	12/05/19	Benzene - <0.00840 Toluene - 0.0167 Ethylbenzene - <0.00572 Total Xylenes - <0.00634 Total BTEX - 0.0167	**3,640**	<0.252	<7.46	<7.46	<0.252
NW - 4	0-.5	Comp	12/05/19	Benzene - <0.00831 Toluene - 0.011 Ethylbenzene - <0.00566 Total Xylenes - <0.00627 Total BTEX - 0.011	145	<0.249	<7.45	<7.45	<0.249
SW - 4	0-.5	Comp	12/05/19	Benzene - <0.00866 Toluene - 0.0172 Ethylbenzene - <0.00590 Total Xylenes - <0.0653 Total BTEX - 0.0172	80.7	<0.260	<7.49	<7.49	<0.260
SW - 3	0-.5	Comp	12/05/19	Benzene - <0.00883 Toluene - 0.0137 Ethylbenzene - <0.00602 Total Xylenes - <0.00666 Total BTEX - 0.0137	69.7	<0.265	<7.48	<7.48	<0.265
SW - 2	0-.5	Comp	12/05/19	Benzene - <0.00850 Toluene - 0.0169 Ethylbenzene - <0.00579 Total Xylenes - <0.00641 Total BTEX - 0.0169	195	<0.255	25.1	<7.47	25.1
SW - 1	0-.5	Comp	12/05/19	Benzene - <0.00864 Toluene - 0.0134 Ethylbenzene - <0.00589 Total Xylenes - <0.00652 Total BTEX - 0.0134	317	<0.259	<7.41	<7.41	<0.259
NW - 1.1	1.5-2	Comp	01/06/20	Benzene - <0.00895 Toluene - <0.00463 Ethylbenzene - <0.00610 Total Xylenes - <0.00675 Total BTEX - <0.00463	**2,790**	<0.268	<7.41	<7.41	<0.268
NW - 3.1	1.5-2	Comp	01/06/20	Benzene - <0.00876 Toluene - <0.00453 Ethylbenzene - <0.00597 Total Xylenes - <0.00661 Total BTEX - <0.00453	46.0	<0.263	<7.50	<7.50	<0.263
FS - 1	3.5-4	Comp	01/06/20	Benzene - <0.00842 Toluene - <0.00436 Ethylbenzene - <0.00574 Total Xylenes - <0.00635 Total BTEX - <0.00436	99.1	<0.252	<7.54	<7.54	<0.252
FS - 2	3.5-4	Comp	01/06/20	Benzene - <0.00892 Toluene - <0.00462 Ethylbenzene - <0.00607 Total Xylenes - <0.00673 Total BTEX - <0.00432	87	<0.265	<7.48	<7.48	<0.265
FS - 3	3.5-4	Comp	01/06/20	Benzene - <0.00892 Toluene - <0.00462 Ethylbenzene - <0.00607 Total Xylenes - <0.00673 Total BTEX - <0.00462	32.3	<0.267	<7.44	<7.44	<0.267
FS - 4	3.5-4	Comp	01/06/20	Benzene - <0.00895 Toluene - <0.00463 Ethylbenzene - <0.00610 Total Xylenes - <0.00675 Total BTEX - <0.00463	72	<0.268	<7.47	<7.47	<0.268
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**	**600**	**N/A**			**100**

1. BTEX = Benzene, toluene, ethylbenzene, total xylenes analyzed by EPA Method 8021B
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Rock Daisy Road Line Release
Terracon Project No. AR197270

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									
WW-1.0	0-.5	Comp	01/28/20	Benzene - N/A Toluene - N/A Ethylbenzene - N/A Total Xylenes - N/A Total BTEX - N/A	**2,220**	N/A	N/A	N/A	N/A
CS-5.1	0-.5	Comp	01/28/20	Benzene - N/A Toluene - N/A Ethylbenzene - N/A Total Xylenes - N/A Total BTEX - N/A	73	N/A	N/A	N/A	N/A
CS-6.1	1.5-2	Comp	01/28/20	Benzene - <0.00883 Toluene - <0.00457 Ethylbenzene - <0.00602 Total Xylenes - <0.00666 Total BTEX - <0.00457	45.9	0.267	<7.52	<7.52	0.267
NW-1.1	1.5-2	Comp	01/28/20	Benzene - N/A Toluene - N/A Ethylbenzene - N/A Total Xylenes - N/A Total BTEX - N/A	**643**	N/A	N/A	N/A	N/A
CS-1.2	3.5-4	Comp	01/28/20	Benzene - N/A Toluene - N/A Ethylbenzene - N/A Total Xylenes - N/A Total BTEX - N/A	40.4	N/A	N/A	N/A	N/A
CS-2.2	3.5-4	Comp	01/28/20	Benzene - N/A Toluene - N/A Ethylbenzene - N/A Total Xylenes - N/A Total BTEX - N/A	24.1	N/A	N/A	N/A	N/A
CS-11.1	3.5-4	Comp	01/28/20	Benzene - N/A Toluene - N/A Ethylbenzene - N/A Total Xylenes - N/A Total BTEX - N/A	33.5	N/A	N/A	N/A	N/A
CS-12.1	3.5-4	Comp	01/28/20	Benzene - N/A Toluene - N/A Ethylbenzene - N/A Total Xylenes - N/A Total BTEX - N/A	29.7	N/A	N/A	N/A	N/A
WW-1.1	3.5-4	Comp	02/04/20	Benzene - <0.00796 Toluene - <0.00412 Ethylbenzene - <0.00542 Total Xylenes - <0.00600 Total BTEX - <0.00412	285	<0.239	<7.47	<7.47	<0.239
NW-1.2	3.5-4	Comp	02/04/20	Benzene - <0.00883 Toluene - <0.00457 Ethylbenzene - <0.00602 Total Xylenes - <0.00666 Total BTEX - <0.00457	374	<0.265	16	<7.47	16.0
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**	**600**	**N/A**			**100**

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 B – PHOTOGRAPHIC LOG

PHOTO 1: View of release origin, facing northeast. 8/14/2019

PHOTO 2: View of site securing, facing west. 8/14/2019

PHOTO 3: View of stockpile, facing North. 8/14/2019

PHOTO 4: View of HA-7, facing south. 8/14/2019

PHOTO 5: View of HA-6, facing south. 8/14/2019

PHOTO 6: View of HA-5, facing southwest. 8/14/2019

PHOTO 7: View of HA-4, facing west. 8/14/2019

PHOTO 8: View of HA-3, facing west. 8/14/2019

PHOTO 9: View of HA-2, facing west. 8/14/2019

PHOTO 10: View of HA-1, facing west. 8/14/2019

PHOTO 11: View of excavation, facing east. 11/08/2019

PHOTO 12: View of excavation, facing southeast. 11/08/2019

PHOTO 13: View of excavation, facing west. 11/08/2019

PHOTO 14: View of excavation, facing west. 11/08/2019

PHOTO 15: View of excavation, facing west. 11/08/2019

PHOTO 16: View of excavation, facing southwest. 11/08/2019

PHOTO 17: View of western portion of excavation, facing north. 11/08/2019

PHOTO 18: View of excavation, facing northeast. 11/08/2019

APPENDIX C – ANALYTICAL REPORT AND CHAIN OF CUSTODY

XENCO LABORATORIES

Certificate of Analysis Summary 634272

Terracon-Lubbock, Lubbock, TX

Project Name: Rock Daisy Road Release

Project Id: AR197270
Contact: Joseph Guesnier
Project Location:

Date Received in Lab: Fri Aug-16-19 04:33 pm
Report Date: 30-AUG-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	634272-001		634272-002		634272-003		634272-004		634272-005		634272-006	
	Field Id:	HA-1 (0-0.5)		HA-1 (0.5-1)		HA-1 (1.5-2)		HA-1 (3.5-4R)		HA-2 (0-0.5)		HA-2 (0.5-1)	
	Depth:	0-0.5 ft		0.5-1 ft		1.5-2 ft		3.5-4 ft		0-0.5 ft		0.5-1 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Aug-14-19 11:45		Aug-14-19 11:50		Aug-14-19 11:55		Aug-14-19 12:00		Aug-14-19 12:05		Aug-14-19 12:10	
BTEX by EPA 8021B	*Extracted:*	Aug-21-19 12:00		Aug-21-19 12:00		Aug-21-19 12:00				Aug-21-19 12:00		Aug-21-19 12:00	
	Analyzed:	Aug-21-19 19:55		Aug-21-19 21:43		Aug-21-19 22:10				Aug-21-19 22:37		Aug-21-19 23:04	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL			mg/kg	RL	mg/kg	RL
Benzene		<0.00790	0.0175	<0.00848	0.0188	<0.00806	0.0178			<0.00842	0.0186	<0.00803	0.0178
Toluene		<0.00409	0.0175	<0.00439	0.0188	<0.00417	0.0178			<0.00436	0.0186	<0.00416	0.0178
Ethylbenzene		<0.00538	0.0175	<0.00578	0.0188	<0.00549	0.0178			<0.00574	0.0186	<0.00547	0.0178
m,p-Xylenes		0.0245 J	0.0350	<0.00640	0.0375	<0.00608	0.0357			0.0130 J	0.0372	<0.00606	0.0355
o-Xylene		<0.00596	0.0175	<0.00640	0.0188	<0.00608	0.0178			<0.00635	0.0186	<0.00606	0.0178
Total Xylenes		0.0245	0.0175	<0.00640	0.0188	<0.00608	0.0178			0.0130 J	0.0186	<0.00606	0.0178
Total BTEX		0.0245	0.0175	<0.00439	0.0188	<0.00417	0.0178			0.0130 J	0.0186	<0.00416	0.0178
Chloride by EPA 300 SUB: T104704215-19-29	*Extracted:*	Aug-19-19 11:03		Aug-19-19 11:03		Aug-19-19 11:03		Aug-23-19 14:41		Aug-19-19 11:03		Aug-19-19 11:03	
	Analyzed:	Aug-19-19 11:09		Aug-19-19 11:21		Aug-19-19 11:34		Aug-23-19 17:38		Aug-19-19 11:47		Aug-19-19 11:59	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		9540	99.8	8390	100	7990	101	6160	99.6	10600	100	4370	101
TPH By SW8015 Mod SUB: T104704215-19-29	*Extracted:*	Aug-21-19 11:09		Aug-21-19 11:18		Aug-21-19 11:21		Aug-28-19 12:09		Aug-21-19 11:24		Aug-21-19 11:27	
	Analyzed:	Aug-21-19 13:32		Aug-21-19 14:43		Aug-21-19 15:21		Aug-29-19 22:06		Aug-21-19 15:40		Aug-21-19 15:59	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<9.92	49.6	<9.93	49.7	<9.97	49.9	12.2 J	49.7	<9.96	49.8	<10.0	50.0
Diesel Range Organics (DRO)		<9.92	49.6	12.6 J	49.7	<9.97	49.9	20.5 J	49.7	25.1 J	49.8	<10.0	50.0
Motor Oil Range Hydrocarbons (MRO)		<9.92	49.6	<9.93	49.7	<9.97	49.9	19.3 J	49.7	<9.96	49.8	<10.0	50.0
Total TPH		<9.92	49.6	12.6 J	49.7	<9.97	49.9	52.0	49.7	25.1 J	49.8	<10.0	50.0

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Jessica Kramer

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 634272

Terracon-Lubbock, Lubbock, TX

Project Name: Rock Daisy Road Release

Project Id: AR197270
Contact: Joseph Guesnier
Project Location:

Date Received in Lab: Fri Aug-16-19 04:33 pm
Report Date: 30-AUG-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	634272-007		634272-008		634272-009		634272-010		634272-011		634272-012	
	Field Id:	HA-2 (1.5-2)		HA-2 (3.5-4)		HA-2 (4.5-5)		HA-3 (0-0.5)		HA-3 (0.5-1)		HA-3 (1.5-2)	
	Depth:	1.5-2 ft		3.5-4 ft		4.5-5 ft		0-0.5 ft		0.5-1 ft		1.5-2 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Aug-14-19 12:15		Aug-14-19 12:20		Aug-14-19 12:25		Aug-14-19 12:30		Aug-14-19 12:35		Aug-14-19 12:40	
BTEX by EPA 8021B	*Extracted:*	Aug-21-19 12:00						Aug-21-19 12:00		Aug-21-19 12:00		Aug-21-19 12:00	
	Analyzed:	Aug-21-19 23:31						Aug-21-19 23:58		Aug-22-19 00:24		Aug-22-19 00:51	
	Units/RL:	mg/kg	RL					mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00878	0.0194					<0.00822	0.0182	<0.00899	0.0199	<0.00892	0.0197
Toluene		<0.00454	0.0194					<0.00425	0.0182	<0.00465	0.0199	<0.00462	0.0197
Ethylbenzene		<0.00598	0.0194					<0.00560	0.0182	<0.00612	0.0199	<0.00607	0.0197
m,p-Xylenes		<0.00662	0.0388					<0.00620	0.0364	<0.00678	0.0398	<0.00673	0.0394
o-Xylene		<0.00662	0.0194					<0.00620	0.0182	<0.00678	0.0199	<0.00673	0.0197
Total Xylenes		<0.00662	0.0194					<0.00620	0.0182	<0.00678	0.0199	<0.00673	0.0197
Total BTEX		<0.00454	0.0194					<0.00425	0.0182	<0.00465	0.0199	<0.00462	0.0197
Chloride by EPA 300 SUB: T104704215-19-29	*Extracted:*	Aug-19-19 11:03		Aug-23-19 14:41		Aug-23-19 14:41		Aug-19-19 11:03		Aug-19-19 11:03		Aug-19-19 11:03	
	Analyzed:	Aug-19-19 12:12		Aug-23-19 17:46		Aug-23-19 17:54		Aug-19-19 12:24		Aug-19-19 13:02		Aug-19-19 13:14	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		3880	9.94	259	9.94	489	10.0	2910	9.88	2310	9.94	2240	10.0
TPH By SW8015 Mod SUB: T104704215-19-29	*Extracted:*	Aug-21-19 11:30		Aug-28-19 12:18				Aug-21-19 11:33		Aug-21-19 11:36		Aug-21-19 11:39	
	Analyzed:	Aug-21-19 16:18		Aug-29-19 23:40				Aug-21-19 17:15		Aug-21-19 17:34		Aug-21-19 17:53	
	Units/RL:	mg/kg	RL	mg/kg	RL			mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<9.99	50.0	10.2 J	50.0			<9.98	49.9	<9.97	49.9	<9.97	49.9
Diesel Range Organics (DRO)		<9.99	50.0	<10.0	50.0			<9.98	49.9	<9.97	49.9	<9.97	49.9
Motor Oil Range Hydrocarbons (MRO)		<9.99	50.0	<10.0	50.0			<9.98	49.9	<9.97	49.9	<9.97	49.9
Total TPH		<9.99	50.0	10.2 J	50.0			<9.98	49.9	<9.97	49.9	<9.97	49.9

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Jessica Kramer

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 634272

Terracon-Lubbock, Lubbock, TX

Project Name: Rock Daisy Road Release

Project Id: AR197270
Contact: Joseph Guesnier
Project Location:

Date Received in Lab: Fri Aug-16-19 04:33 pm
Report Date: 30-AUG-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	634272-013		634272-014		634272-015		634272-016		634272-017		634272-018	
	Field Id:	HA-4 (0-0.5)		HA-4 (0.5-1)		HA-4 (1.5-2)		HA-4 (3.5-4)		HA-4 (4.5-5)		HA-5 (0-0.5)	
	Depth:	0-0.5 ft		0.5-1 ft		1.5-2 ft		3.5-4 ft		4.5-5 ft		0-0.5 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Aug-14-19 12:45		Aug-14-19 12:50		Aug-14-19 12:55		Aug-14-19 13:00		Aug-14-19 13:05		Aug-14-19 13:10	
BTEX by EPA 8021B	*Extracted:*	Aug-21-19 12:00		Aug-21-19 12:00		Aug-21-19 12:00						Aug-21-19 12:00	
	Analyzed:	Aug-22-19 01:18		Aug-22-19 03:05		Aug-22-19 03:31						Aug-22-19 03:58	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL					mg/kg	RL
Benzene		<0.00856	0.0189	<0.00853	0.0189	<0.00843	0.0187					<0.00866	0.0192
Toluene		<0.00443	0.0189	<0.00442	0.0189	<0.00437	0.0187					<0.00448	0.0192
Ethylbenzene		<0.00583	0.0189	<0.00581	0.0189	<0.00575	0.0187					<0.00590	0.0192
m,p-Xylenes		<0.00646	0.0379	<0.00643	0.0377	<0.00636	0.0373					<0.00653	0.0383
o-Xylene		<0.00646	0.0189	<0.00643	0.0189	<0.00636	0.0187					<0.00653	0.0192
Total Xylenes		<0.00646	0.0189	<0.00643	0.0189	<0.00636	0.0187					<0.00653	0.0192
Total BTEX		<0.00443	0.0189	<0.00442	0.0189	<0.00437	0.0187					<0.00448	0.0192
Chloride by EPA 300 SUB: T104704215-19-29	*Extracted:*	Aug-19-19 11:03		Aug-19-19 11:03		Aug-19-19 11:03		Aug-23-19 14:41		Aug-23-19 14:41		Aug-19-19 11:03	
	Analyzed:	Aug-19-19 13:52		Aug-19-19 14:04		Aug-19-19 14:17		Aug-23-19 18:03		Aug-23-19 18:27		Aug-19-19 14:29	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		8460	99.6	2560	9.94	6760	100	221	9.98	140	9.95	3120	9.94
TPH By SW8015 Mod SUB: T104704215-19-29	*Extracted:*	Aug-21-19 11:42		Aug-21-19 11:45		Aug-21-19 11:48		Aug-28-19 12:21				Aug-21-19 11:51	
	Analyzed:	Aug-21-19 18:12		Aug-21-19 18:31		Aug-21-19 18:50		Aug-29-19 23:59				Aug-21-19 19:09	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL			mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<10.0	50.0	<9.92	49.6	<9.95	49.8	10.8 J	50.0			<9.96	49.8
Diesel Range Organics (DRO)		<10.0	50.0	<9.92	49.6	<9.95	49.8	<9.99	50.0			<9.96	49.8
Motor Oil Range Hydrocarbons (MRO)		<10.0	50.0	<9.92	49.6	<9.95	49.8	<9.99	50.0			<9.96	49.8
Total TPH		<10.0	50.0	<9.92	49.6	<9.95	49.8	10.8 J	50.0			<9.96	49.8

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Jessica Kramer

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Project Assistant

XENCO LABORATORIES

Certificate of Analysis Summary 634272

Terracon-Lubbock, Lubbock, TX

Project Name: Rock Daisy Road Release

Project Id: AR197270

Contact: Joseph Guesnier

Project Location:

Date Received in Lab: Fri Aug-16-19 04:33 pm

Report Date: 30-AUG-19

Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	634272-019		634272-020		634272-021		634272-022		634272-023		634272-024	
	Field Id:	HA-5 (0.5-1)		HA-5 (1.5-2)		HA-6 (0-0.5)		HA-6 (0.5-1)		HA-6 (1.5-2)		HA-6 (3.5-4)	
	Depth:	0.5-1 ft		1.5-2 ft		0-0.5 ft		0.5-1 ft		1.5-2 ft		3.5-4 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Aug-14-19 13:15		Aug-14-19 13:20		Aug-14-19 13:25		Aug-14-19 13:30		Aug-14-19 13:35		Aug-14-19 13:40	
BTEX by EPA 8021B	*Extracted:*	Aug-21-19 12:00		Aug-21-19 12:00		Aug-21-19 12:00		Aug-21-19 12:00		Aug-21-19 12:00			
	Analyzed:	Aug-22-19 04:25		Aug-22-19 04:52		Aug-22-19 05:19		Aug-22-19 05:45		Aug-22-19 06:12			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Benzene		<0.00878	0.0194	<0.00825	0.0182	<0.00842	0.0186	<0.00893	0.0198	<0.00883	0.0195		
Toluene		<0.00454	0.0194	<0.00427	0.0182	<0.00436	0.0186	<0.00462	0.0198	<0.00457	0.0195		
Ethylbenzene		<0.00598	0.0194	<0.00562	0.0182	<0.00574	0.0186	<0.00609	0.0198	<0.00602	0.0195		
m,p-Xylenes		<0.00662	0.0388	<0.00622	0.0365	0.0130 J	0.0372	0.0178 J	0.0395	<0.00666	0.0391		
o-Xylene		<0.00662	0.0194	<0.00622	0.0182	<0.00635	0.0186	<0.00674	0.0198	<0.00666	0.0195		
Total Xylenes		<0.00662	0.0194	<0.00622	0.0182	0.0130 J	0.0186	0.0178 J	0.0198	<0.00666	0.0195		
Total BTEX		<0.00454	0.0194	<0.00427	0.0182	0.0130 J	0.0186	0.0178 J	0.0198	<0.00457	0.0195		
Chloride by EPA 300 SUB: T104704215-19-29	*Extracted:*	Aug-19-19 11:03		Aug-19-19 11:03		Aug-19-19 11:03		Aug-19-19 11:03		Aug-19-19 11:03		Aug-23-19 14:41	
	Analyzed:	Aug-19-19 14:42		Aug-19-19 14:54		Aug-19-19 15:57		Aug-19-19 16:09		Aug-19-19 16:22		Aug-23-19 18:36	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		6130	99.2	1430	10.0	6250	99.8	3230	10.0	10100	99.4	7960	98.8
TPH By SW8015 Mod SUB: T104704215-19-29	*Extracted:*	Aug-21-19 11:54		Aug-21-19 11:57		Aug-21-19 12:00		Aug-21-19 12:03		Aug-21-19 12:06		Aug-28-19 12:24	
	Analyzed:	Aug-21-19 19:28		Aug-21-19 19:47		Aug-21-19 20:06		Aug-21-19 20:43		Aug-21-19 21:02		Aug-29-19 23:59	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<9.90	49.5	<9.95	49.8	10.9 J	49.7	<9.95	49.8	11.1 J	50.0	<9.97	49.9
Diesel Range Organics (DRO)		<9.90	49.5	<9.95	49.8	14.0 J	49.7	<9.95	49.8	21.2 J	50.0	<9.97	49.9
Motor Oil Range Hydrocarbons (MRO)		<9.90	49.5	<9.95	49.8	<9.94	49.7	<9.95	49.8	<9.99	50.0	<9.97	49.9
Total TPH		<9.90	49.5	<9.95	49.8	24.9 J	49.7	<9.95	49.8	32.3 J	50.0	<9.97	49.9

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Jessica Kramer

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 634272

Terracon-Lubbock, Lubbock, TX

Project Name: Rock Daisy Road Release

Project Id: AR197270
Contact: Joseph Guesnier
Project Location:

Date Received in Lab: Fri Aug-16-19 04:33 pm
Report Date: 30-AUG-19
Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	634272-025		634272-026		634272-027		634272-028		634272-029	
	Field Id:	HA-6 (4.5-5)		HA-7 (0-0.5)		HA-7 (0.5-1)		HA-7 (1.5-2)		SP-1	
	Depth:	4.5-5 ft		0-0.5 ft		0.5-1 ft		1.5-2 ft			
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Aug-14-19 13:45		Aug-14-19 13:50		Aug-14-19 13:55		Aug-14-19 14:00		Aug-14-19 15:30	
BTEX by EPA 8021B	***Extracted:***			Aug-21-19 12:00		Aug-21-19 12:00		Aug-21-19 12:00		Aug-21-19 12:00	
	Analyzed:			Aug-22-19 06:39		Aug-22-19 07:06		Aug-21-19 18:36		Aug-21-19 19:00	
	Units/RL:			mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene				<0.00893	0.0198	<0.00826	0.0183	<0.00832	0.0184	<0.00886	0.0196
Toluene				<0.00462	0.0198	<0.00428	0.0183	0.0331	0.0184	0.00588 J	0.0196
Ethylbenzene				<0.00609	0.0198	<0.00563	0.0183	0.0552	0.0184	<0.00604	0.0196
m,p-Xylenes				<0.00674	0.0395	<0.00623	0.0366	0.0681	0.0368	<0.00669	0.0392
o-Xylene				<0.00674	0.0198	<0.00623	0.0183	0.0276	0.0184	<0.00669	0.0196
Total Xylenes				<0.00674	0.0198	<0.00623	0.0183	0.0957	0.0184	<0.00669	0.0196
Total BTEX				<0.00462	0.0198	<0.00428	0.0183	0.184	0.0184	0.00588 J	0.0196
Chloride by EPA 300 SUB: T104704215-19-29	***Extracted:***	Aug-23-19 14:41		Aug-19-19 11:03		Aug-19-19 11:03		Aug-19-19 11:45		Aug-19-19 11:45	
	Analyzed:	Aug-23-19 18:44		Aug-19-19 16:34		Aug-19-19 16:47		Aug-19-19 12:29		Aug-19-19 12:54	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		6250	101	8240	99.2	9990	99.6	77.2	10.0	9240	99.4
TPH By SW8015 Mod SUB: T104704215-19-29	***Extracted:***			Aug-21-19 12:09		Aug-21-19 12:12		Aug-21-19 16:09		Aug-21-19 16:18	
	Analyzed:			Aug-21-19 21:21		Aug-21-19 21:40		Aug-22-19 03:18		Aug-22-19 04:15	
	Units/RL:			mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)				<9.94	49.7	<10.0	50.0	<9.94	49.7	51.6	50.0
Diesel Range Organics (DRO)				<9.94	49.7	13.5 J	50.0	<9.94	49.7	331	50.0
Motor Oil Range Hydrocarbons (MRO)				<9.94	49.7	<10.0	50.0	<9.94	49.7	49.0 J	50.0
Total TPH				<9.94	49.7	13.5 J	50.0	<9.94	49.7	432	50.0

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

Jessica Kramer

Jessica Kramer
Project Assistant

Analytical Report 634272

for

Terracon-Lubbock

Project Manager: Joseph Guesnier

Rock Daisy Road Release

AR197270

30-AUG-19

Collected By: Client

6701 Aberdeen, Suite 9 Lubbock, TX 79424

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-29), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142), North Carolina (681)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-19-19), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429), North Carolina (483)

30-AUG-19

Project Manager: **Joseph Guesnier**
Terracon-Lubbock
5827 50th st, Suite 1
Lubbock, TX 79424

Reference: XENCO Report No(s): **634272**
Rock Daisy Road 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 XENCO Report Number(s) 634272. 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. 634272 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 Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

Sample Cross Reference 634272

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road Release

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
HA-1 (0-0.5)	S	08-14-19 11:45	0 - 0.5 ft	634272-001
HA-1 (0.5-1)	S	08-14-19 11:50	0.5 - 1 ft	634272-002
HA-1 (1.5-2)	S	08-14-19 11:55	1.5 - 2 ft	634272-003
HA-1 (3.5-4R)	S	08-14-19 12:00	3.5 - 4 ft	634272-004
HA-2 (0-0.5)	S	08-14-19 12:05	0 - 0.5 ft	634272-005
HA-2 (0.5-1)	S	08-14-19 12:10	0.5 - 1 ft	634272-006
HA-2 (1.5-2)	S	08-14-19 12:15	1.5 - 2 ft	634272-007
HA-2 (3.5-4)	S	08-14-19 12:20	3.5 - 4 ft	634272-008
HA-2 (4.5-5)	S	08-14-19 12:25	4.5 - 5 ft	634272-009
HA-3 (0-0.5)	S	08-14-19 12:30	0 - 0.5 ft	634272-010
HA-3 (0.5-1)	S	08-14-19 12:35	0.5 - 1 ft	634272-011
HA-3 (1.5-2)	S	08-14-19 12:40	1.5 - 2 ft	634272-012
HA-4 (0-0.5)	S	08-14-19 12:45	0 - 0.5 ft	634272-013
HA-4 (0.5-1)	S	08-14-19 12:50	0.5 - 1 ft	634272-014
HA-4 (1.5-2)	S	08-14-19 12:55	1.5 - 2 ft	634272-015
HA-4 (3.5-4)	S	08-14-19 13:00	3.5 - 4 ft	634272-016
HA-4 (4.5-5)	S	08-14-19 13:05	4.5 - 5 ft	634272-017
HA-5 (0-0.5)	S	08-14-19 13:10	0 - 0.5 ft	634272-018
HA-5 (0.5-1)	S	08-14-19 13:15	0.5 - 1 ft	634272-019
HA-5 (1.5-2)	S	08-14-19 13:20	1.5 - 2 ft	634272-020
HA-6 (0-0.5)	S	08-14-19 13:25	0 - 0.5 ft	634272-021
HA-6 (0.5-1)	S	08-14-19 13:30	0.5 - 1 ft	634272-022
HA-6 (1.5-2)	S	08-14-19 13:35	1.5 - 2 ft	634272-023
HA-6 (3.5-4)	S	08-14-19 13:40	3.5 - 4 ft	634272-024
HA-6 (4.5-5)	S	08-14-19 13:45	4.5 - 5 ft	634272-025
HA-7 (0-0.5)	S	08-14-19 13:50	0 - 0.5 ft	634272-026
HA-7 (0.5-1)	S	08-14-19 13:55	0.5 - 1 ft	634272-027
HA-7 (1.5-2)	S	08-14-19 14:00	1.5 - 2 ft	634272-028
SP-1	S	08-14-19 15:30		634272-029

CASE NARRATIVE

Client Name: Terracon-Lubbock
Project Name: Rock Daisy Road Release

Project ID:	*AR197270*	Report Date:	*30-AUG-19*
Work Order Number(s):	*634272*	Date Received:	*08/16/2019*

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:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3098953 Chloride by EPA 300
Lab Sample ID 634272-020 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride 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: 634272-001, -002, -003, -005, -006, -007, -010, -011, -012, -013, -014, -015, -018, -019, -020, -021, -022, -023, -026, -027.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3099287 BTEX-MTBE by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3099291 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3099327 TPH by SW8015 Mod
Surrogate 1-Chlorooctane, Surrogate o-Terphenyl recovered above QC limits Data confirmed by re-analysis. Samples affected are: 7684707-1-BKS.

Certificate of Analytical Results 634272

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road Release

Sample Id: **HA-1 (0-0.5)** Matrix: Soil Date Received: 08.16.19 16.33
Lab Sample Id: 634272-001 Date Collected: 08.14.19 11.45 Sample Depth: 0 - 0.5 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: JYM % Moisture:
Analyst: JYM Date Prep: 08.19.19 11.03 Basis: Wet Weight
Seq Number: 3098953 SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**9540**	99.8	3.53	mg/kg	08.19.19 11.09		10

Analytical Method: TPH By SW8015 Mod Prep Method: TX1005P
Tech: ISU % Moisture:
Analyst: ISU Date Prep: 08.21.19 11.09 Basis: Wet Weight
Seq Number: 3099315 SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.92	49.6	9.92	mg/kg	08.21.19 13.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<9.92	49.6	9.92	mg/kg	08.21.19 13.32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<9.92	49.6	9.92	mg/kg	08.21.19 13.32	U	1
Total TPH	PHC635	<9.92	49.6	9.92	mg/kg	08.21.19 13.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	08.21.19 13.32	
o-Terphenyl	84-15-1	106	%	70-135	08.21.19 13.32	

Certificate of Analytical Results 634272

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road Release

Sample Id:	**HA-1 (0-0.5)**	Matrix:	Soil	Date Received:	08.16.19 16.33
Lab Sample Id:	634272-001	Date Collected:	08.14.19 11.45	Sample Depth:	0 - 0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	08.21.19 12.00	Basis:	Wet Weight
Seq Number:	3099291				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00790	0.0175	0.00790	mg/kg	08.21.19 19.55	U	1
Toluene	108-88-3	<0.00409	0.0175	0.00409	mg/kg	08.21.19 19.55	U	1
Ethylbenzene	100-41-4	<0.00538	0.0175	0.00538	mg/kg	08.21.19 19.55	U	1
m,p-Xylenes	179601-23-1	**0.0245**	0.0350	0.00596	mg/kg	08.21.19 19.55	J	1
o-Xylene	95-47-6	<0.00596	0.0175	0.00596	mg/kg	08.21.19 19.55	U	1
Total Xylenes	1330-20-7	**0.0245**	0.0175	0.00596	mg/kg	08.21.19 19.55		1
Total BTEX		**0.0245**	0.0175	0.00409	mg/kg	08.21.19 19.55		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	98	%	68-120	08.21.19 19.55	
a,a,a-Trifluorotoluene	98-08-8	93	%	71-121	08.21.19 19.55	

Certificate of Analytical Results 634272

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road Release

Sample Id:	**HA-1 (0.5-1)**	Matrix:	Soil	Date Received:	08.16.19 16.33
Lab Sample Id:	634272-002	Date Collected:	08.14.19 11.50	Sample Depth:	0.5 - 1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	08.19.19 11.03	Basis:	Wet Weight
Seq Number:	3098953			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8390**	100	3.54	mg/kg	08.19.19 11.21		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ISU			% Moisture:	
Analyst:	ISU	Date Prep:	08.21.19 11.18	Basis:	Wet Weight
Seq Number:	3099315			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.93	49.7	9.93	mg/kg	08.21.19 14.43	U	1
Diesel Range Organics (DRO)	C10C28DRO	**12.6**	49.7	9.93	mg/kg	08.21.19 14.43	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<9.93	49.7	9.93	mg/kg	08.21.19 14.43	U	1
Total TPH	PHC635	**12.6**	49.7	9.93	mg/kg	08.21.19 14.43	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	08.21.19 14.43	
o-Terphenyl	84-15-1	116	%	70-135	08.21.19 14.43	

XENCO LABORATORIES

Certificate of Analytical Results 634272

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road Release

Sample Id:	**HA-1 (0.5-1)**	Matrix:	Soil	Date Received:	08.16.19 16.33
Lab Sample Id:	634272-002	Date Collected:	08.14.19 11.50	Sample Depth:	0.5 - 1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	08.21.19 12.00	Basis:	Wet Weight
Seq Number:	3099291				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00848	0.0188	0.00848	mg/kg	08.21.19 21.43	U	1
Toluene	108-88-3	<0.00439	0.0188	0.00439	mg/kg	08.21.19 21.43	U	1
Ethylbenzene	100-41-4	<0.00578	0.0188	0.00578	mg/kg	08.21.19 21.43	U	1
m,p-Xylenes	179601-23-1	<0.00640	0.0375	0.00640	mg/kg	08.21.19 21.43	U	1
o-Xylene	95-47-6	<0.00640	0.0188	0.00640	mg/kg	08.21.19 21.43	U	1
Total Xylenes	1330-20-7	<0.00640	0.0188	0.00640	mg/kg	08.21.19 21.43	U	1
Total BTEX		<0.00439	0.0188	0.00439	mg/kg	08.21.19 21.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	98	%	68-120	08.21.19 21.43	
a,a,a-Trifluorotoluene	98-08-8	92	%	71-121	08.21.19 21.43	

Certificate of Analytical Results 634272

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road Release

Sample Id: **HA-1 (1.5-2)**
Lab Sample Id: 634272-003
Matrix: Soil
Date Collected: 08.14.19 11.55
Date Received: 08.16.19 16.33
Sample Depth: 1.5 - 2 ft

Analytical Method: Chloride by EPA 300
Tech: JYM
Analyst: JYM
Seq Number: 3098953
Date Prep: 08.19.19 11.03
Prep Method: E300P
% Moisture:
Basis: Wet Weight
SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**7990**	101	3.56	mg/kg	08.19.19 11.34		10

Analytical Method: TPH By SW8015 Mod
Tech: ISU
Analyst: ISU
Seq Number: 3099315
Date Prep: 08.21.19 11.21
Prep Method: TX1005P
% Moisture:
Basis: Wet Weight
SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.97	49.9	9.97	mg/kg	08.21.19 15.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<9.97	49.9	9.97	mg/kg	08.21.19 15.21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<9.97	49.9	9.97	mg/kg	08.21.19 15.21	U	1
Total TPH	PHC635	<9.97	49.9	9.97	mg/kg	08.21.19 15.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	08.21.19 15.21	
o-Terphenyl	84-15-1	120	%	70-135	08.21.19 15.21	

Certificate of Analytical Results 634272

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road Release

Sample Id:	**HA-1 (1.5-2)**	Matrix:	Soil	Date Received:	08.16.19 16.33
Lab Sample Id:	634272-003	Date Collected:	08.14.19 11.55	Sample Depth:	1.5 - 2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	08.21.19 12.00	Basis:	Wet Weight
Seq Number:	3099291				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00806	0.0178	0.00806	mg/kg	08.21.19 22.10	U	1
Toluene	108-88-3	<0.00417	0.0178	0.00417	mg/kg	08.21.19 22.10	U	1
Ethylbenzene	100-41-4	<0.00549	0.0178	0.00549	mg/kg	08.21.19 22.10	U	1
m,p-Xylenes	179601-23-1	<0.00608	0.0357	0.00608	mg/kg	08.21.19 22.10	U	1
o-Xylene	95-47-6	<0.00608	0.0178	0.00608	mg/kg	08.21.19 22.10	U	1
Total Xylenes	1330-20-7	<0.00608	0.0178	0.00608	mg/kg	08.21.19 22.10	U	1
Total BTEX		<0.00417	0.0178	0.00417	mg/kg	08.21.19 22.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	97	%	68-120	08.21.19 22.10	
a,a,a-Trifluorotoluene	98-08-8	93	%	71-121	08.21.19 22.10	

Certificate of Analytical Results 634272

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road Release

Sample Id:	**HA-1 (3.5-4R)**	Matrix:	Soil	Date Received:	08.16.19 16.33
Lab Sample Id:	634272-004	Date Collected:	08.14.19 12.00	Sample Depth:	3.5 - 4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	08.23.19 14.41	Basis:	Wet Weight
Seq Number:	3099545			SUB: T104704215-19-29	

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**6160**	99.6	3.53	mg/kg	08.23.19 17.38		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ISU			% Moisture:	
Analyst:	DRU	Date Prep:	08.28.19 12.09	Basis:	Wet Weight
Seq Number:	3100243			SUB: T104704215-19-29	

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**12.2**	49.7	9.93	mg/kg	08.29.19 22.06	J	1
Diesel Range Organics (DRO)	C10C28DRO	**20.5**	49.7	9.93	mg/kg	08.29.19 22.06	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**19.3**	49.7	9.93	mg/kg	08.29.19 22.06	J	1
Total TPH	PHC635	**52.0**	49.7	9.93	mg/kg	08.29.19 22.06		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	08.29.19 22.06	
o-Terphenyl	84-15-1	114	%	70-135	08.29.19 22.06	

Certificate of Analytical Results 634272

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road Release

Sample Id:	**HA-2 (0-0.5)**	Matrix:	Soil	Date Received:	08.16.19 16.33
Lab Sample Id:	634272-005	Date Collected:	08.14.19 12.05	Sample Depth:	0 - 0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	08.19.19 11.03	Basis:	Wet Weight
Seq Number:	3098953			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**10600**	100	3.55	mg/kg	08.19.19 11.47		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ISU			% Moisture:	
Analyst:	ISU	Date Prep:	08.21.19 11.24	Basis:	Wet Weight
Seq Number:	3099315			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.96	49.8	9.96	mg/kg	08.21.19 15.40	U	1
Diesel Range Organics (DRO)	C10C28DRO	**25.1**	49.8	9.96	mg/kg	08.21.19 15.40	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<9.96	49.8	9.96	mg/kg	08.21.19 15.40	U	1
Total TPH	PHC635	**25.1**	49.8	9.96	mg/kg	08.21.19 15.40	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	08.21.19 15.40	
o-Terphenyl	84-15-1	126	%	70-135	08.21.19 15.40	

XENCO LABORATORIES

Certificate of Analytical Results 634272

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road Release

Sample Id:	**HA-2 (0-0.5)**	Matrix:	Soil	Date Received:	08.16.19 16.33
Lab Sample Id:	634272-005	Date Collected:	08.14.19 12.05	Sample Depth:	0 - 0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	08.21.19 12.00	Basis:	Wet Weight
Seq Number:	3099291				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00842	0.0186	0.00842	mg/kg	08.21.19 22.37	U	1
Toluene	108-88-3	<0.00436	0.0186	0.00436	mg/kg	08.21.19 22.37	U	1
Ethylbenzene	100-41-4	<0.00574	0.0186	0.00574	mg/kg	08.21.19 22.37	U	1
m,p-Xylenes	179601-23-1	**0.0130**	0.0372	0.00635	mg/kg	08.21.19 22.37	J	1
o-Xylene	95-47-6	<0.00635	0.0186	0.00635	mg/kg	08.21.19 22.37	U	1
Total Xylenes	1330-20-7	**0.0130**	0.0186	0.00635	mg/kg	08.21.19 22.37	J	1
Total BTEX		**0.0130**	0.0186	0.00436	mg/kg	08.21.19 22.37	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	98	%	68-120	08.21.19 22.37	
a,a,a-Trifluorotoluene	98-08-8	93	%	71-121	08.21.19 22.37	

XENCO LABORATORIES

Certificate of Analytical Results 634272

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road Release

Sample Id:	**HA-2 (0.5-1)**	Matrix:	Soil	Date Received:	08.16.19 16.33
Lab Sample Id:	634272-006	Date Collected:	08.14.19 12.10	Sample Depth:	0.5 - 1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	08.19.19 11.03	Basis:	Wet Weight
Seq Number:	3098953			SUB: T104704215-19-29	

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**4370**	101	3.56	mg/kg	08.19.19 11.59		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ISU			% Moisture:	
Analyst:	ISU	Date Prep:	08.21.19 11.27	Basis:	Wet Weight
Seq Number:	3099315			SUB: T104704215-19-29	

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<10.0	50.0	10.0	mg/kg	08.21.19 15.59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<10.0	50.0	10.0	mg/kg	08.21.19 15.59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<10.0	50.0	10.0	mg/kg	08.21.19 15.59	U	1
Total TPH	PHC635	<10.0	50.0	10.0	mg/kg	08.21.19 15.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	08.21.19 15.59	
o-Terphenyl	84-15-1	116	%	70-135	08.21.19 15.59	

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Terracon-Lubbock, Lubbock, TX

Rock Daisy Road Release

Sample Id:	**HA-2 (0.5-1)**	Matrix:	Soil	Date Received:	08.16.19 16.33
Lab Sample Id:	634272-006	Date Collected:	08.14.19 12.10	Sample Depth:	0.5 - 1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	08.21.19 12.00	Basis:	Wet Weight
Seq Number:	3099291				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00803	0.0178	0.00803	mg/kg	08.21.19 23.04	U	1
Toluene	108-88-3	<0.00416	0.0178	0.00416	mg/kg	08.21.19 23.04	U	1
Ethylbenzene	100-41-4	<0.00547	0.0178	0.00547	mg/kg	08.21.19 23.04	U	1
m,p-Xylenes	179601-23-1	<0.00606	0.0355	0.00606	mg/kg	08.21.19 23.04	U	1
o-Xylene	95-47-6	<0.00606	0.0178	0.00606	mg/kg	08.21.19 23.04	U	1
Total Xylenes	1330-20-7	<0.00606	0.0178	0.00606	mg/kg	08.21.19 23.04	U	1
Total BTEX		<0.00416	0.0178	0.00416	mg/kg	08.21.19 23.04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	96	%	68-120	08.21.19 23.04	
a,a,a-Trifluorotoluene	98-08-8	93	%	71-121	08.21.19 23.04	

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Terracon-Lubbock, Lubbock, TX

Rock Daisy Road Release

Sample Id: **HA-2 (1.5-2)**
Lab Sample Id: 634272-007
Matrix: Soil
Date Collected: 08.14.19 12.15
Date Received: 08.16.19 16.33
Sample Depth: 1.5 - 2 ft

Analytical Method: Chloride by EPA 300
Tech: JYM
Analyst: JYM
Seq Number: 3098953
Date Prep: 08.19.19 11.03
Prep Method: E300P
% Moisture:
Basis: Wet Weight
SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**3880**	9.94	0.352	mg/kg	08.19.19 12.12		1

Analytical Method: TPH By SW8015 Mod
Tech: ISU
Analyst: ISU
Seq Number: 3099315
Date Prep: 08.21.19 11.30
Prep Method: TX1005P
% Moisture:
Basis: Wet Weight
SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.99	50.0	9.99	mg/kg	08.21.19 16.18	U	1
Diesel Range Organics (DRO)	C10C28DRO	<9.99	50.0	9.99	mg/kg	08.21.19 16.18	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<9.99	50.0	9.99	mg/kg	08.21.19 16.18	U	1
Total TPH	PHC635	<9.99	50.0	9.99	mg/kg	08.21.19 16.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	08.21.19 16.18	
o-Terphenyl	84-15-1	117	%	70-135	08.21.19 16.18	

Certificate of Analytical Results 634272

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road Release

Sample Id: **HA-2 (1.5-2)**
Lab Sample Id: 634272-007
Matrix: Soil
Date Collected: 08.14.19 12.15
Date Received: 08.16.19 16.33
Sample Depth: 1.5 - 2 ft

Analytical Method: BTEX by EPA 8021B
Prep Method: SW5030B
Tech: MIT
% Moisture:
Analyst: MIT
Date Prep: 08.21.19 12.00
Basis: Wet Weight
Seq Number: 3099291

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00878	0.0194	0.00878	mg/kg	08.21.19 23.31	U	1
Toluene	108-88-3	<0.00454	0.0194	0.00454	mg/kg	08.21.19 23.31	U	1
Ethylbenzene	100-41-4	<0.00598	0.0194	0.00598	mg/kg	08.21.19 23.31	U	1
m,p-Xylenes	179601-23-1	<0.00662	0.0388	0.00662	mg/kg	08.21.19 23.31	U	1
o-Xylene	95-47-6	<0.00662	0.0194	0.00662	mg/kg	08.21.19 23.31	U	1
Total Xylenes	1330-20-7	<0.00662	0.0194	0.00662	mg/kg	08.21.19 23.31	U	1
Total BTEX		<0.00454	0.0194	0.00454	mg/kg	08.21.19 23.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	97	%	68-120	08.21.19 23.31	
a,a,a-Trifluorotoluene	98-08-8	92	%	71-121	08.21.19 23.31	

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Terracon-Lubbock, Lubbock, TX

Rock Daisy Road Release

Sample Id: **HA-2 (3.5-4)**	Matrix: Soil	Date Received: 08.16.19 16.33	
Lab Sample Id: 634272-008	Date Collected: 08.14.19 12.20	Sample Depth: 3.5 - 4 ft	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P

Tech: JYM — % Moisture:

Analyst: JYM — Date Prep: 08.23.19 14.41 — Basis: Wet Weight

Seq Number: 3099545 — SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**259**	9.94	0.352	mg/kg	08.23.19 17.46		1

Analytical Method: TPH By SW8015 Mod — Prep Method: TX1005P

Tech: ISU — % Moisture:

Analyst: DRU — Date Prep: 08.28.19 12.18 — Basis: Wet Weight

Seq Number: 3100243 — SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**10.2**	50.0	10.0	mg/kg	08.29.19 23.40	J	1
Diesel Range Organics (DRO)	C10C28DRO	<10.0	50.0	10.0	mg/kg	08.29.19 23.40	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<10.0	50.0	10.0	mg/kg	08.29.19 23.40	U	1
Total TPH	PHC635	**10.2**	50.0	10.0	mg/kg	08.29.19 23.40	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	08.29.19 23.40	
o-Terphenyl	84-15-1	128	%	70-135	08.29.19 23.40	

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Terracon-Lubbock, Lubbock, TX

Rock Daisy Road Release

Sample Id:	**HA-2 (4.5-5)**	Matrix:	Soil	Date Received:	08.16.19 16.33
Lab Sample Id:	634272-009	Date Collected:	08.14.19 12.25	Sample Depth:	4.5 - 5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	08.23.19 14.41	Basis:	Wet Weight
Seq Number:	3099545			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**489**	10.0	0.355	mg/kg	08.23.19 17.54		1

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Terracon-Lubbock, Lubbock, TX

Rock Daisy Road Release

Sample Id: **HA-3 (0-0.5)**
Matrix: Soil
Date Received: 08.16.19 16.33
Lab Sample Id: 634272-010
Date Collected: 08.14.19 12.30
Sample Depth: 0 - 0.5 ft

Analytical Method: Chloride by EPA 300
Prep Method: E300P
Tech: JYM
% Moisture:
Analyst: JYM
Date Prep: 08.19.19 11.03
Basis: Wet Weight
Seq Number: 3098953
SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2910**	9.88	0.350	mg/kg	08.19.19 12.24		1

Analytical Method: TPH By SW8015 Mod
Prep Method: TX1005P
Tech: ISU
% Moisture:
Analyst: ISU
Date Prep: 08.21.19 11.33
Basis: Wet Weight
Seq Number: 3099315
SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.98	49.9	9.98	mg/kg	08.21.19 17.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<9.98	49.9	9.98	mg/kg	08.21.19 17.15	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<9.98	49.9	9.98	mg/kg	08.21.19 17.15	U	1
Total TPH	PHC635	<9.98	49.9	9.98	mg/kg	08.21.19 17.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	08.21.19 17.15	
o-Terphenyl	84-15-1	117	%	70-135	08.21.19 17.15	

Certificate of Analytical Results 634272

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road Release

Sample Id:	**HA-3 (0-0.5)**	Matrix:	Soil	Date Received:	08.16.19 16.33
Lab Sample Id:	634272-010	Date Collected:	08.14.19 12.30	Sample Depth:	0 - 0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	08.21.19 12.00	Basis:	Wet Weight
Seq Number:	3099291				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00822	0.0182	0.00822	mg/kg	08.21.19 23.58	U	1
Toluene	108-88-3	<0.00425	0.0182	0.00425	mg/kg	08.21.19 23.58	U	1
Ethylbenzene	100-41-4	<0.00560	0.0182	0.00560	mg/kg	08.21.19 23.58	U	1
m,p-Xylenes	179601-23-1	<0.00620	0.0364	0.00620	mg/kg	08.21.19 23.58	U	1
o-Xylene	95-47-6	<0.00620	0.0182	0.00620	mg/kg	08.21.19 23.58	U	1
Total Xylenes	1330-20-7	<0.00620	0.0182	0.00620	mg/kg	08.21.19 23.58	U	1
Total BTEX		<0.00425	0.0182	0.00425	mg/kg	08.21.19 23.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	97	%	68-120	08.21.19 23.58	
a,a,a-Trifluorotoluene	98-08-8	92	%	71-121	08.21.19 23.58	

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Terracon-Lubbock, Lubbock, TX

Rock Daisy Road Release

Sample Id:	**HA-3 (0.5-1)**	Matrix:	Soil	Date Received:	08.16.19 16.33
Lab Sample Id:	634272-011	Date Collected:	08.14.19 12.35	Sample Depth:	0.5 - 1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	08.19.19 11.03	Basis:	Wet Weight
Seq Number:	3098953			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2310**	9.94	0.352	mg/kg	08.19.19 13.02		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ISU			% Moisture:	
Analyst:	ISU	Date Prep:	08.21.19 11.36	Basis:	Wet Weight
Seq Number:	3099315			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.97	49.9	9.97	mg/kg	08.21.19 17.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<9.97	49.9	9.97	mg/kg	08.21.19 17.34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<9.97	49.9	9.97	mg/kg	08.21.19 17.34	U	1
Total TPH	PHC635	<9.97	49.9	9.97	mg/kg	08.21.19 17.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	08.21.19 17.34	
o-Terphenyl	84-15-1	115	%	70-135	08.21.19 17.34	

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Terracon-Lubbock, Lubbock, TX

Rock Daisy Road Release

Sample Id:	**HA-3 (0.5-1)**	Matrix:	Soil	Date Received:	08.16.19 16.33
Lab Sample Id:	634272-011	Date Collected:	08.14.19 12.35	Sample Depth:	0.5 - 1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	08.21.19 12.00	Basis:	Wet Weight
Seq Number:	3099291				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00899	0.0199	0.00899	mg/kg	08.22.19 00.24	U	1
Toluene	108-88-3	<0.00465	0.0199	0.00465	mg/kg	08.22.19 00.24	U	1
Ethylbenzene	100-41-4	<0.00612	0.0199	0.00612	mg/kg	08.22.19 00.24	U	1
m,p-Xylenes	179601-23-1	<0.00678	0.0398	0.00678	mg/kg	08.22.19 00.24	U	1
o-Xylene	95-47-6	<0.00678	0.0199	0.00678	mg/kg	08.22.19 00.24	U	1
Total Xylenes	1330-20-7	<0.00678	0.0199	0.00678	mg/kg	08.22.19 00.24	U	1
Total BTEX		<0.00465	0.0199	0.00465	mg/kg	08.22.19 00.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	97	%	68-120	08.22.19 00.24	
a,a,a-Trifluorotoluene	98-08-8	92	%	71-121	08.22.19 00.24	

Certificate of Analytical Results 634272

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road Release

Sample Id: **HA-3 (1.5-2)**
Matrix: Soil
Date Received:08.16.19 16.33
Lab Sample Id: 634272-012
Date Collected: 08.14.19 12.40
Sample Depth: 1.5 - 2 ft

Analytical Method: Chloride by EPA 300
Prep Method: E300P
Tech: JYM
% Moisture:
Analyst: JYM
Date Prep: 08.19.19 11.03
Basis: Wet Weight
Seq Number: 3098953
SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2240**	10.0	0.355	mg/kg	08.19.19 13.14		1

Analytical Method: TPH By SW8015 Mod
Prep Method: TX1005P
Tech: ISU
% Moisture:
Analyst: ISU
Date Prep: 08.21.19 11.39
Basis: Wet Weight
Seq Number: 3099315
SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.97	49.9	9.97	mg/kg	08.21.19 17.53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<9.97	49.9	9.97	mg/kg	08.21.19 17.53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<9.97	49.9	9.97	mg/kg	08.21.19 17.53	U	1
Total TPH	PHC635	<9.97	49.9	9.97	mg/kg	08.21.19 17.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	08.21.19 17.53	
o-Terphenyl	84-15-1	116	%	70-135	08.21.19 17.53	

Certificate of Analytical Results 634272

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road Release

Sample Id:	**HA-3 (1.5-2)**	Matrix:	Soil	Date Received:	08.16.19 16.33
Lab Sample Id:	634272-012	Date Collected:	08.14.19 12.40	Sample Depth:	1.5 - 2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	08.21.19 12.00	Basis:	Wet Weight
Seq Number:	3099291				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00892	0.0197	0.00892	mg/kg	08.22.19 00.51	U	1
Toluene	108-88-3	<0.00462	0.0197	0.00462	mg/kg	08.22.19 00.51	U	1
Ethylbenzene	100-41-4	<0.00607	0.0197	0.00607	mg/kg	08.22.19 00.51	U	1
m,p-Xylenes	179601-23-1	<0.00673	0.0394	0.00673	mg/kg	08.22.19 00.51	U	1
o-Xylene	95-47-6	<0.00673	0.0197	0.00673	mg/kg	08.22.19 00.51	U	1
Total Xylenes	1330-20-7	<0.00673	0.0197	0.00673	mg/kg	08.22.19 00.51	U	1
Total BTEX		<0.00462	0.0197	0.00462	mg/kg	08.22.19 00.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	94	%	68-120	08.22.19 00.51	
a,a,a-Trifluorotoluene	98-08-8	92	%	71-121	08.22.19 00.51	

XENCO LABORATORIES

Certificate of Analytical Results 634272

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road Release

Sample Id:	**HA-4 (0-0.5)**	Matrix:	Soil	Date Received:	08.16.19 16.33
Lab Sample Id:	634272-013	Date Collected:	08.14.19 12.45	Sample Depth:	0 - 0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	08.19.19 11.03	Basis:	Wet Weight
Seq Number:	3098953			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8460**	99.6	3.53	mg/kg	08.19.19 13.52		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ISU			% Moisture:	
Analyst:	ISU	Date Prep:	08.21.19 11.42	Basis:	Wet Weight
Seq Number:	3099315			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<10.0	50.0	10.0	mg/kg	08.21.19 18.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<10.0	50.0	10.0	mg/kg	08.21.19 18.12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<10.0	50.0	10.0	mg/kg	08.21.19 18.12	U	1
Total TPH	PHC635	<10.0	50.0	10.0	mg/kg	08.21.19 18.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	08.21.19 18.12	
o-Terphenyl	84-15-1	124	%	70-135	08.21.19 18.12	

Certificate of Analytical Results 634272

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road Release

Sample Id:	**HA-4 (0-0.5)**	Matrix:	Soil	Date Received:	08.16.19 16.33
Lab Sample Id:	634272-013	Date Collected:	08.14.19 12.45	Sample Depth:	0 - 0.5 ft

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	08.21.19 12.00	Basis:	Wet Weight
Seq Number:	3099291				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00856	0.0189	0.00856	mg/kg	08.22.19 01.18	U	1
Toluene	108-88-3	<0.00443	0.0189	0.00443	mg/kg	08.22.19 01.18	U	1
Ethylbenzene	100-41-4	<0.00583	0.0189	0.00583	mg/kg	08.22.19 01.18	U	1
m,p-Xylenes	179601-23-1	<0.00646	0.0379	0.00646	mg/kg	08.22.19 01.18	U	1
o-Xylene	95-47-6	<0.00646	0.0189	0.00646	mg/kg	08.22.19 01.18	U	1
Total Xylenes	1330-20-7	<0.00646	0.0189	0.00646	mg/kg	08.22.19 01.18	U	1
Total BTEX		<0.00443	0.0189	0.00443	mg/kg	08.22.19 01.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	99	%	68-120	08.22.19 01.18	
a,a,a-Trifluorotoluene	98-08-8	92	%	71-121	08.22.19 01.18	

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Terracon-Lubbock, Lubbock, TX

Rock Daisy Road Release

Sample Id: **HA-4 (0.5-1)** Matrix: Soil Date Received:08.16.19 16.33
Lab Sample Id: 634272-014 Date Collected: 08.14.19 12.50 Sample Depth: 0.5 - 1 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: JYM % Moisture:
Analyst: JYM Date Prep: 08.19.19 11.03 Basis: Wet Weight
Seq Number: 3098953 SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2560**	9.94	0.352	mg/kg	08.19.19 14.04		1

Analytical Method: TPH By SW8015 Mod Prep Method: TX1005P
Tech: ISU % Moisture:
Analyst: ISU Date Prep: 08.21.19 11.45 Basis: Wet Weight
Seq Number: 3099315 SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.92	49.6	9.92	mg/kg	08.21.19 18.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<9.92	49.6	9.92	mg/kg	08.21.19 18.31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<9.92	49.6	9.92	mg/kg	08.21.19 18.31	U	1
Total TPH	PHC635	<9.92	49.6	9.92	mg/kg	08.21.19 18.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	08.21.19 18.31	
o-Terphenyl	84-15-1	121	%	70-135	08.21.19 18.31	

Certificate of Analytical Results 634272

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road Release

Sample Id: **HA-4 (0.5-1)**
Lab Sample Id: 634272-014
Matrix: Soil
Date Collected: 08.14.19 12.50
Date Received: 08.16.19 16.33
Sample Depth: 0.5 - 1 ft

Analytical Method: BTEX by EPA 8021B
Prep Method: SW5030B
Tech: MIT
% Moisture:
Analyst: MIT
Date Prep: 08.21.19 12.00
Basis: Wet Weight
Seq Number: 3099291

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00853	0.0189	0.00853	mg/kg	08.22.19 03.05	U	1
Toluene	108-88-3	<0.00442	0.0189	0.00442	mg/kg	08.22.19 03.05	U	1
Ethylbenzene	100-41-4	<0.00581	0.0189	0.00581	mg/kg	08.22.19 03.05	U	1
m,p-Xylenes	179601-23-1	<0.00643	0.0377	0.00643	mg/kg	08.22.19 03.05	U	1
o-Xylene	95-47-6	<0.00643	0.0189	0.00643	mg/kg	08.22.19 03.05	U	1
Total Xylenes	1330-20-7	<0.00643	0.0189	0.00643	mg/kg	08.22.19 03.05	U	1
Total BTEX		<0.00442	0.0189	0.00442	mg/kg	08.22.19 03.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	99	%	68-120	08.22.19 03.05	
a,a,a-Trifluorotoluene	98-08-8	90	%	71-121	08.22.19 03.05	

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Terracon-Lubbock, Lubbock, TX

Rock Daisy Road Release

Sample Id: **HA-4 (1.5-2)** Matrix: Soil Date Received:08.16.19 16.33
Lab Sample Id: 634272-015 Date Collected: 08.14.19 12.55 Sample Depth: 1.5 - 2 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: JYM % Moisture:
Analyst: JYM Date Prep: 08.19.19 11.03 Basis: Wet Weight
Seq Number: 3098953 SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**6760**	100	3.55	mg/kg	08.19.19 14.17		10

Analytical Method: TPH By SW8015 Mod Prep Method: TX1005P
Tech: ISU % Moisture:
Analyst: ISU Date Prep: 08.21.19 11.48 Basis: Wet Weight
Seq Number: 3099315 SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.95	49.8	9.95	mg/kg	08.21.19 18.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<9.95	49.8	9.95	mg/kg	08.21.19 18.50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<9.95	49.8	9.95	mg/kg	08.21.19 18.50	U	1
Total TPH	PHC635	<9.95	49.8	9.95	mg/kg	08.21.19 18.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	08.21.19 18.50	
o-Terphenyl	84-15-1	126	%	70-135	08.21.19 18.50	

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Terracon-Lubbock, Lubbock, TX

Rock Daisy Road Release

Sample Id:	**HA-4 (1.5-2)**	Matrix:	Soil	Date Received:	08.16.19 16.33
Lab Sample Id:	634272-015	Date Collected:	08.14.19 12.55	Sample Depth:	1.5 - 2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	08.21.19 12.00	Basis:	Wet Weight
Seq Number:	3099291				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00843	0.0187	0.00843	mg/kg	08.22.19 03.31	U	1
Toluene	108-88-3	<0.00437	0.0187	0.00437	mg/kg	08.22.19 03.31	U	1
Ethylbenzene	100-41-4	<0.00575	0.0187	0.00575	mg/kg	08.22.19 03.31	U	1
m,p-Xylenes	179601-23-1	<0.00636	0.0373	0.00636	mg/kg	08.22.19 03.31	U	1
o-Xylene	95-47-6	<0.00636	0.0187	0.00636	mg/kg	08.22.19 03.31	U	1
Total Xylenes	1330-20-7	<0.00636	0.0187	0.00636	mg/kg	08.22.19 03.31	U	1
Total BTEX		<0.00437	0.0187	0.00437	mg/kg	08.22.19 03.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	68-120	08.22.19 03.31	
a,a,a-Trifluorotoluene	98-08-8	91	%	71-121	08.22.19 03.31	

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Terracon-Lubbock, Lubbock, TX

Rock Daisy Road Release

Sample Id:	**HA-4 (3.5-4)**	Matrix:	Soil	Date Received:	08.16.19 16.33
Lab Sample Id:	634272-016	Date Collected:	08.14.19 13.00	Sample Depth:	3.5 - 4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	08.23.19 14.41	Basis:	Wet Weight
Seq Number:	3099545			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**221**	9.98	0.353	mg/kg	08.23.19 18.03		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ISU			% Moisture:	
Analyst:	DRU	Date Prep:	08.28.19 12.21	Basis:	Wet Weight
Seq Number:	3100243			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**10.8**	50.0	9.99	mg/kg	08.29.19 23.59	J	1
Diesel Range Organics (DRO)	C10C28DRO	<9.99	50.0	9.99	mg/kg	08.29.19 23.59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<9.99	50.0	9.99	mg/kg	08.29.19 23.59	U	1
Total TPH	PHC635	**10.8**	50.0	9.99	mg/kg	08.29.19 23.59	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	08.29.19 23.59	
o-Terphenyl	84-15-1	130	%	70-135	08.29.19 23.59	

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Terracon-Lubbock, Lubbock, TX

Rock Daisy Road Release

Sample Id: **HA-4 (4.5-5)**	Matrix: Soil		Date Received: 08.16.19 16.33
Lab Sample Id: 634272-017	Date Collected: 08.14.19 13.05		Sample Depth: 4.5 - 5 ft
Analytical Method: Chloride by EPA 300			Prep Method: E300P
Tech: JYM			% Moisture:
Analyst: JYM	Date Prep: 08.23.19 14.41		Basis: Wet Weight
Seq Number: 3099545			SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**140**	9.95	0.352	mg/kg	08.23.19 18.27		1

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Terracon-Lubbock, Lubbock, TX

Rock Daisy Road Release

Sample Id: **HA-5 (0-0.5)**
Lab Sample Id: 634272-018
Matrix: Soil
Date Collected: 08.14.19 13.10
Date Received: 08.16.19 16.33
Sample Depth: 0 - 0.5 ft

Analytical Method: Chloride by EPA 300
Tech: JYM
Analyst: JYM
Seq Number: 3098953
Date Prep: 08.19.19 11.03
Prep Method: E300P
% Moisture:
Basis: Wet Weight
SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**3120**	9.94	0.352	mg/kg	08.19.19 14.29		1

Analytical Method: TPH By SW8015 Mod
Tech: ISU
Analyst: ISU
Seq Number: 3099315
Date Prep: 08.21.19 11.51
Prep Method: TX1005P
% Moisture:
Basis: Wet Weight
SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.96	49.8	9.96	mg/kg	08.21.19 19.09	U	1
Diesel Range Organics (DRO)	C10C28DRO	<9.96	49.8	9.96	mg/kg	08.21.19 19.09	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<9.96	49.8	9.96	mg/kg	08.21.19 19.09	U	1
Total TPH	PHC635	<9.96	49.8	9.96	mg/kg	08.21.19 19.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	08.21.19 19.09	
o-Terphenyl	84-15-1	120	%	70-135	08.21.19 19.09	

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Terracon-Lubbock, Lubbock, TX

Rock Daisy Road Release

Sample Id: **HA-5 (0-0.5)**
Lab Sample Id: 634272-018
Matrix: Soil
Date Collected: 08.14.19 13.10
Date Received: 08.16.19 16.33
Sample Depth: 0 - 0.5 ft

Analytical Method: BTEX by EPA 8021B
Prep Method: SW5030B
Tech: MIT
% Moisture:
Analyst: MIT
Date Prep: 08.21.19 12.00
Basis: Wet Weight
Seq Number: 3099291

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00866	0.0192	0.00866	mg/kg	08.22.19 03.58	U	1
Toluene	108-88-3	<0.00448	0.0192	0.00448	mg/kg	08.22.19 03.58	U	1
Ethylbenzene	100-41-4	<0.00590	0.0192	0.00590	mg/kg	08.22.19 03.58	U	1
m,p-Xylenes	179601-23-1	<0.00653	0.0383	0.00653	mg/kg	08.22.19 03.58	U	1
o-Xylene	95-47-6	<0.00653	0.0192	0.00653	mg/kg	08.22.19 03.58	U	1
Total Xylenes	1330-20-7	<0.00653	0.0192	0.00653	mg/kg	08.22.19 03.58	U	1
Total BTEX		<0.00448	0.0192	0.00448	mg/kg	08.22.19 03.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	68-120	08.22.19 03.58	
a,a,a-Trifluorotoluene	98-08-8	92	%	71-121	08.22.19 03.58	

Certificate of Analytical Results 634272

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road Release

Sample Id: **HA-5 (0.5-1)** Matrix: Soil Date Received:08.16.19 16.33
Lab Sample Id: 634272-019 Date Collected: 08.14.19 13.15 Sample Depth: 0.5 - 1 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: JYM % Moisture:
Analyst: JYM Date Prep: 08.19.19 11.03 Basis: Wet Weight
Seq Number: 3098953 SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**6130**	99.2	3.51	mg/kg	08.19.19 14.42		10

Analytical Method: TPH By SW8015 Mod Prep Method: TX1005P
Tech: ISU % Moisture:
Analyst: ISU Date Prep: 08.21.19 11.54 Basis: Wet Weight
Seq Number: 3099315 SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.90	49.5	9.90	mg/kg	08.21.19 19.28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<9.90	49.5	9.90	mg/kg	08.21.19 19.28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<9.90	49.5	9.90	mg/kg	08.21.19 19.28	U	1
Total TPH	PHC635	<9.90	49.5	9.90	mg/kg	08.21.19 19.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	08.21.19 19.28	
o-Terphenyl	84-15-1	117	%	70-135	08.21.19 19.28	

Certificate of Analytical Results 634272

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road Release

Sample Id:	**HA-5 (0.5-1)**	Matrix:	Soil	Date Received:	08.16.19 16.33
Lab Sample Id:	634272-019	Date Collected:	08.14.19 13.15	Sample Depth:	0.5 - 1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	08.21.19 12.00	Basis:	Wet Weight
Seq Number:	3099291				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00878	0.0194	0.00878	mg/kg	08.22.19 04.25	U	1
Toluene	108-88-3	<0.00454	0.0194	0.00454	mg/kg	08.22.19 04.25	U	1
Ethylbenzene	100-41-4	<0.00598	0.0194	0.00598	mg/kg	08.22.19 04.25	U	1
m,p-Xylenes	179601-23-1	<0.00662	0.0388	0.00662	mg/kg	08.22.19 04.25	U	1
o-Xylene	95-47-6	<0.00662	0.0194	0.00662	mg/kg	08.22.19 04.25	U	1
Total Xylenes	1330-20-7	<0.00662	0.0194	0.00662	mg/kg	08.22.19 04.25	U	1
Total BTEX		<0.00454	0.0194	0.00454	mg/kg	08.22.19 04.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	99	%	68-120	08.22.19 04.25	
a,a,a-Trifluorotoluene	98-08-8	92	%	71-121	08.22.19 04.25	

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Terracon-Lubbock, Lubbock, TX

Rock Daisy Road Release

Sample Id:	**HA-5 (1.5-2)**	Matrix:	Soil	Date Received:	08.16.19 16.33
Lab Sample Id:	634272-020	Date Collected:	08.14.19 13.20	Sample Depth:	1.5 - 2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	08.19.19 11.03	Basis:	Wet Weight
Seq Number:	3098953			SUB: T104704215-19-29	

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1430**	10.0	0.354	mg/kg	08.19.19 14.54		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ISU			% Moisture:	
Analyst:	ISU	Date Prep:	08.21.19 11.57	Basis:	Wet Weight
Seq Number:	3099315			SUB: T104704215-19-29	

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.95	49.8	9.95	mg/kg	08.21.19 19.47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<9.95	49.8	9.95	mg/kg	08.21.19 19.47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<9.95	49.8	9.95	mg/kg	08.21.19 19.47	U	1
Total TPH	PHC635	<9.95	49.8	9.95	mg/kg	08.21.19 19.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	08.21.19 19.47	
o-Terphenyl	84-15-1	119	%	70-135	08.21.19 19.47	

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Terracon-Lubbock, Lubbock, TX

Rock Daisy Road Release

Sample Id:	**HA-5 (1.5-2)**	Matrix:	Soil	Date Received:	08.16.19 16.33
Lab Sample Id:	634272-020	Date Collected:	08.14.19 13.20	Sample Depth:	1.5 - 2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	08.21.19 12.00	Basis:	Wet Weight
Seq Number:	3099291				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00825	0.0182	0.00825	mg/kg	08.22.19 04.52	U	1
Toluene	108-88-3	<0.00427	0.0182	0.00427	mg/kg	08.22.19 04.52	U	1
Ethylbenzene	100-41-4	<0.00562	0.0182	0.00562	mg/kg	08.22.19 04.52	U	1
m,p-Xylenes	179601-23-1	<0.00622	0.0365	0.00622	mg/kg	08.22.19 04.52	U	1
o-Xylene	95-47-6	<0.00622	0.0182	0.00622	mg/kg	08.22.19 04.52	U	1
Total Xylenes	1330-20-7	<0.00622	0.0182	0.00622	mg/kg	08.22.19 04.52	U	1
Total BTEX		<0.00427	0.0182	0.00427	mg/kg	08.22.19 04.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	68-120	08.22.19 04.52	
a,a,a-Trifluorotoluene	98-08-8	91	%	71-121	08.22.19 04.52	

Certificate of Analytical Results 634272

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road Release

Sample Id:	**HA-6 (0-0.5)**	Matrix:	Soil	Date Received:	08.16.19 16.33
Lab Sample Id:	634272-021	Date Collected:	08.14.19 13.25	Sample Depth:	0 - 0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	08.19.19 11.03	Basis:	Wet Weight
Seq Number:	3098953			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**6250**	99.8	3.53	mg/kg	08.19.19 15.57		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ISU			% Moisture:	
Analyst:	ISU	Date Prep:	08.21.19 12.00	Basis:	Wet Weight
Seq Number:	3099315			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**10.9**	49.7	9.94	mg/kg	08.21.19 20.06	J	1
Diesel Range Organics (DRO)	C10C28DRO	**14.0**	49.7	9.94	mg/kg	08.21.19 20.06	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<9.94	49.7	9.94	mg/kg	08.21.19 20.06	U	1
Total TPH	PHC635	**24.9**	49.7	9.94	mg/kg	08.21.19 20.06	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	08.21.19 20.06	
o-Terphenyl	84-15-1	122	%	70-135	08.21.19 20.06	

Certificate of Analytical Results 634272

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road Release

Sample Id:	**HA-6 (0-0.5)**	Matrix:	Soil	Date Received:	08.16.19 16.33
Lab Sample Id:	634272-021	Date Collected:	08.14.19 13.25	Sample Depth:	0 - 0.5 ft

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	08.21.19 12.00	Basis:	Wet Weight
Seq Number:	3099291				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00842	0.0186	0.00842	mg/kg	08.22.19 05.19	U	1
Toluene	108-88-3	<0.00436	0.0186	0.00436	mg/kg	08.22.19 05.19	U	1
Ethylbenzene	100-41-4	<0.00574	0.0186	0.00574	mg/kg	08.22.19 05.19	U	1
m,p-Xylenes	179601-23-1	**0.0130**	0.0372	0.00635	mg/kg	08.22.19 05.19	J	1
o-Xylene	95-47-6	<0.00635	0.0186	0.00635	mg/kg	08.22.19 05.19	U	1
Total Xylenes	1330-20-7	**0.0130**	0.0186	0.00635	mg/kg	08.22.19 05.19	J	1
Total BTEX		**0.0130**	0.0186	0.00436	mg/kg	08.22.19 05.19	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	97	%	68-120	08.22.19 05.19	
a,a,a-Trifluorotoluene	98-08-8	91	%	71-121	08.22.19 05.19	

Certificate of Analytical Results 634272

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road Release

Sample Id: **HA-6 (0.5-1)**
Lab Sample Id: 634272-022
Matrix: Soil
Date Collected: 08.14.19 13.30
Date Received: 08.16.19 16.33
Sample Depth: 0.5 - 1 ft

Analytical Method: Chloride by EPA 300
Tech: JYM
Analyst: JYM
Seq Number: 3098953
Date Prep: 08.19.19 11.03
Prep Method: E300P
% Moisture:
Basis: Wet Weight
SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**3230**	10.0	0.355	mg/kg	08.19.19 16.09		1

Analytical Method: TPH By SW8015 Mod
Tech: ISU
Analyst: ISU
Seq Number: 3099315
Date Prep: 08.21.19 12.03
Prep Method: TX1005P
% Moisture:
Basis: Wet Weight
SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.95	49.8	9.95	mg/kg	08.21.19 20.43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<9.95	49.8	9.95	mg/kg	08.21.19 20.43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<9.95	49.8	9.95	mg/kg	08.21.19 20.43	U	1
Total TPH	PHC635	<9.95	49.8	9.95	mg/kg	08.21.19 20.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	08.21.19 20.43	
o-Terphenyl	84-15-1	118	%	70-135	08.21.19 20.43	

Certificate of Analytical Results 634272

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road Release

Sample Id:	**HA-6 (0.5-1)**	Matrix:	Soil	Date Received:	08.16.19 16.33
Lab Sample Id:	634272-022	Date Collected:	08.14.19 13.30	Sample Depth:	0.5 - 1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	08.21.19 12.00	Basis:	Wet Weight
Seq Number:	3099291				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00893	0.0198	0.00893	mg/kg	08.22.19 05.45	U	1
Toluene	108-88-3	<0.00462	0.0198	0.00462	mg/kg	08.22.19 05.45	U	1
Ethylbenzene	100-41-4	<0.00609	0.0198	0.00609	mg/kg	08.22.19 05.45	U	1
m,p-Xylenes	179601-23-1	**0.0178**	0.0395	0.00674	mg/kg	08.22.19 05.45	J	1
o-Xylene	95-47-6	<0.00674	0.0198	0.00674	mg/kg	08.22.19 05.45	U	1
Total Xylenes	1330-20-7	**0.0178**	0.0198	0.00674	mg/kg	08.22.19 05.45	J	1
Total BTEX		**0.0178**	0.0198	0.00462	mg/kg	08.22.19 05.45	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	68-120	08.22.19 05.45	
a,a,a-Trifluorotoluene	98-08-8	91	%	71-121	08.22.19 05.45	

Certificate of Analytical Results 634272

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road Release

Sample Id:	**HA-6 (1.5-2)**	Matrix:	Soil	Date Received:	08.16.19 16.33
Lab Sample Id:	634272-023	Date Collected:	08.14.19 13.35	Sample Depth:	1.5 - 2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	08.19.19 11.03	Basis:	Wet Weight
Seq Number:	3098953			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**10100**	99.4	3.52	mg/kg	08.19.19 16.22		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ISU			% Moisture:	
Analyst:	ISU	Date Prep:	08.21.19 12.06	Basis:	Wet Weight
Seq Number:	3099315			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**11.1**	50.0	9.99	mg/kg	08.21.19 21.02	J	1
Diesel Range Organics (DRO)	C10C28DRO	**21.2**	50.0	9.99	mg/kg	08.21.19 21.02	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<9.99	50.0	9.99	mg/kg	08.21.19 21.02	U	1
Total TPH	PHC635	**32.3**	50.0	9.99	mg/kg	08.21.19 21.02	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	08.21.19 21.02	
o-Terphenyl	84-15-1	124	%	70-135	08.21.19 21.02	

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Terracon-Lubbock, Lubbock, TX

Rock Daisy Road Release

Sample Id:	**HA-6 (1.5-2)**	Matrix:	Soil	Date Received:	08.16.19 16.33
Lab Sample Id:	634272-023	Date Collected:	08.14.19 13.35	Sample Depth:	1.5 - 2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	08.21.19 12.00	Basis:	Wet Weight
Seq Number:	3099291				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00883	0.0195	0.00883	mg/kg	08.22.19 06.12	U	1
Toluene	108-88-3	<0.00457	0.0195	0.00457	mg/kg	08.22.19 06.12	U	1
Ethylbenzene	100-41-4	<0.00602	0.0195	0.00602	mg/kg	08.22.19 06.12	U	1
m,p-Xylenes	179601-23-1	<0.00666	0.0391	0.00666	mg/kg	08.22.19 06.12	U	1
o-Xylene	95-47-6	<0.00666	0.0195	0.00666	mg/kg	08.22.19 06.12	U	1
Total Xylenes	1330-20-7	<0.00666	0.0195	0.00666	mg/kg	08.22.19 06.12	U	1
Total BTEX		<0.00457	0.0195	0.00457	mg/kg	08.22.19 06.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	68-120	08.22.19 06.12	
a,a,a-Trifluorotoluene	98-08-8	92	%	71-121	08.22.19 06.12	

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Terracon-Lubbock, Lubbock, TX

Rock Daisy Road Release

Sample Id: **HA-6 (3.5-4)**
Lab Sample Id: 634272-024
Matrix: Soil
Date Collected: 08.14.19 13.40
Date Received: 08.16.19 16.33
Sample Depth: 3.5 - 4 ft

Analytical Method: Chloride by EPA 300
Tech: JYM
Analyst: JYM
Seq Number: 3099545
Date Prep: 08.23.19 14.41
Prep Method: E300P
% Moisture:
Basis: Wet Weight
SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**7960**	98.8	3.50	mg/kg	08.23.19 18.36		10

Analytical Method: TPH By SW8015 Mod
Tech: ISU
Analyst: DRU
Seq Number: 3100243
Date Prep: 08.28.19 12.24
Prep Method: TX1005P
% Moisture:
Basis: Wet Weight
SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.97	49.9	9.97	mg/kg	08.29.19 23.59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<9.97	49.9	9.97	mg/kg	08.29.19 23.59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<9.97	49.9	9.97	mg/kg	08.29.19 23.59	U	1
Total TPH	PHC635	<9.97	49.9	9.97	mg/kg	08.29.19 23.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	08.29.19 23.59	
o-Terphenyl	84-15-1	110	%	70-135	08.29.19 23.59	

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Terracon-Lubbock, Lubbock, TX

Rock Daisy Road Release

Sample Id: **HA-6 (4.5-5)**
Lab Sample Id: 634272-025
Matrix: Soil
Date Collected: 08.14.19 13.45
Date Received: 08.16.19 16.33
Sample Depth: 4.5 - 5 ft

Analytical Method: Chloride by EPA 300
Tech: JYM
Analyst: JYM
Seq Number: 3099545
Date Prep: 08.23.19 14.41
Prep Method: E300P
% Moisture:
Basis: Wet Weight
SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**6250**	101	3.56	mg/kg	08.23.19 18.44		10

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Terracon-Lubbock, Lubbock, TX

Rock Daisy Road Release

Sample Id: **HA-7 (0-0.5)**
Lab Sample Id: 634272-026
Matrix: Soil
Date Collected: 08.14.19 13.50
Date Received: 08.16.19 16.33
Sample Depth: 0 - 0.5 ft

Analytical Method: Chloride by EPA 300
Tech: JYM
Analyst: JYM
Seq Number: 3098953
Date Prep: 08.19.19 11.03
Prep Method: E300P
% Moisture:
Basis: Wet Weight
SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8240**	99.2	3.51	mg/kg	08.19.19 16.34		10

Analytical Method: TPH By SW8015 Mod
Tech: ISU
Analyst: ISU
Seq Number: 3099315
Date Prep: 08.21.19 12.09
Prep Method: TX1005P
% Moisture:
Basis: Wet Weight
SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.94	49.7	9.94	mg/kg	08.21.19 21.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<9.94	49.7	9.94	mg/kg	08.21.19 21.21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<9.94	49.7	9.94	mg/kg	08.21.19 21.21	U	1
Total TPH	PHC635	<9.94	49.7	9.94	mg/kg	08.21.19 21.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	08.21.19 21.21	
o-Terphenyl	84-15-1	123	%	70-135	08.21.19 21.21	

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Terracon-Lubbock, Lubbock, TX

Rock Daisy Road Release

Sample Id:	**HA-7 (0-0.5)**	Matrix:	Soil	Date Received:	08.16.19 16.33
Lab Sample Id:	634272-026	Date Collected:	08.14.19 13.50	Sample Depth:	0 - 0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	08.21.19 12.00	Basis:	Wet Weight
Seq Number:	3099291				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00893	0.0198	0.00893	mg/kg	08.22.19 06.39	U	1
Toluene	108-88-3	<0.00462	0.0198	0.00462	mg/kg	08.22.19 06.39	U	1
Ethylbenzene	100-41-4	<0.00609	0.0198	0.00609	mg/kg	08.22.19 06.39	U	1
m,p-Xylenes	179601-23-1	<0.00674	0.0395	0.00674	mg/kg	08.22.19 06.39	U	1
o-Xylene	95-47-6	<0.00674	0.0198	0.00674	mg/kg	08.22.19 06.39	U	1
Total Xylenes	1330-20-7	<0.00674	0.0198	0.00674	mg/kg	08.22.19 06.39	U	1
Total BTEX		<0.00462	0.0198	0.00462	mg/kg	08.22.19 06.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	97	%	68-120	08.22.19 06.39	
a,a,a-Trifluorotoluene	98-08-8	91	%	71-121	08.22.19 06.39	

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Terracon-Lubbock, Lubbock, TX

Rock Daisy Road Release

Sample Id:	**HA-7 (0.5-1)**	Matrix:	Soil	Date Received:	08.16.19 16.33
Lab Sample Id:	634272-027	Date Collected:	08.14.19 13.55	Sample Depth:	0.5 - 1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	08.19.19 11.03	Basis:	Wet Weight
Seq Number:	3098953			SUB: T104704215-19-29	

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**9990**	99.6	3.53	mg/kg	08.19.19 16.47		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ISU			% Moisture:	
Analyst:	ISU	Date Prep:	08.21.19 12.12	Basis:	Wet Weight
Seq Number:	3099315			SUB: T104704215-19-29	

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<10.0	50.0	10.0	mg/kg	08.21.19 21.40	U	1
Diesel Range Organics (DRO)	C10C28DRO	**13.5**	50.0	10.0	mg/kg	08.21.19 21.40	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<10.0	50.0	10.0	mg/kg	08.21.19 21.40	U	1
Total TPH	PHC635	**13.5**	50.0	10.0	mg/kg	08.21.19 21.40	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	08.21.19 21.40	
o-Terphenyl	84-15-1	125	%	70-135	08.21.19 21.40	

Certificate of Analytical Results 634272

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road Release

Sample Id:	**HA-7 (0.5-1)**	Matrix:	Soil	Date Received:	08.16.19 16.33
Lab Sample Id:	634272-027	Date Collected:	08.14.19 13.55	Sample Depth:	0.5 - 1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	08.21.19 12.00	Basis:	Wet Weight
Seq Number:	3099291				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00826	0.0183	0.00826	mg/kg	08.22.19 07.06	U	1
Toluene	108-88-3	<0.00428	0.0183	0.00428	mg/kg	08.22.19 07.06	U	1
Ethylbenzene	100-41-4	<0.00563	0.0183	0.00563	mg/kg	08.22.19 07.06	U	1
m,p-Xylenes	179601-23-1	<0.00623	0.0366	0.00623	mg/kg	08.22.19 07.06	U	1
o-Xylene	95-47-6	<0.00623	0.0183	0.00623	mg/kg	08.22.19 07.06	U	1
Total Xylenes	1330-20-7	<0.00623	0.0183	0.00623	mg/kg	08.22.19 07.06	U	1
Total BTEX		<0.00428	0.0183	0.00428	mg/kg	08.22.19 07.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	99	%	68-120	08.22.19 07.06	
a,a,a-Trifluorotoluene	98-08-8	91	%	71-121	08.22.19 07.06	

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Terracon-Lubbock, Lubbock, TX

Rock Daisy Road Release

Sample Id:	**HA-7 (1.5-2)**	Matrix:	Soil	Date Received:	08.16.19 16.33
Lab Sample Id:	634272-028	Date Collected:	08.14.19 14.00	Sample Depth:	1.5 - 2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	08.19.19 11.45	Basis:	Wet Weight
Seq Number:	3098934			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**77.2**	10.0	0.354	mg/kg	08.19.19 12.29		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ISU			% Moisture:	
Analyst:	ISU	Date Prep:	08.21.19 16.09	Basis:	Wet Weight
Seq Number:	3099327			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.94	49.7	9.94	mg/kg	08.22.19 03.18	U	1
Diesel Range Organics (DRO)	C10C28DRO	<9.94	49.7	9.94	mg/kg	08.22.19 03.18	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<9.94	49.7	9.94	mg/kg	08.22.19 03.18	U	1
Total TPH	PHC635	<9.94	49.7	9.94	mg/kg	08.22.19 03.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	08.22.19 03.18	
o-Terphenyl	84-15-1	113	%	70-135	08.22.19 03.18	

 Final 1.001

Certificate of Analytical Results 634272

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road Release

Sample Id: **HA-7 (1.5-2)**
Lab Sample Id: 634272-028

Matrix: Soil
Date Collected: 08.14.19 14.00

Date Received: 08.16.19 16.33
Sample Depth: 1.5 - 2 ft

Analytical Method: BTEX by EPA 8021B
Tech: MIT
Analyst: MIT
Seq Number: 3099287

Date Prep: 08.21.19 12.00

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00832	0.0184	0.00832	mg/kg	08.21.19 18.36	U	1
Toluene	108-88-3	**0.0331**	0.0184	0.00431	mg/kg	08.21.19 18.36		1
Ethylbenzene	100-41-4	**0.0552**	0.0184	0.00567	mg/kg	08.21.19 18.36		1
m,p-Xylenes	179601-23-1	**0.0681**	0.0368	0.00628	mg/kg	08.21.19 18.36		1
o-Xylene	95-47-6	**0.0276**	0.0184	0.00628	mg/kg	08.21.19 18.36		1
Total Xylenes	1330-20-7	**0.0957**	0.0184	0.00628	mg/kg	08.21.19 18.36		1
Total BTEX		**0.184**	0.0184	0.00431	mg/kg	08.21.19 18.36		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	91	%	68-120	08.21.19 18.36	
a,a,a-Trifluorotoluene	98-08-8	93	%	71-121	08.21.19 18.36	

Certificate of Analytical Results 634272

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road Release

Sample Id:	**SP-1**	Matrix:	Soil	Date Received:	08.16.19 16.33
Lab Sample Id:	634272-029	Date Collected:	08.14.19 15.30		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	08.19.19 11.45	Basis:	Wet Weight
Seq Number:	3098934			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**9240**	99.4	3.52	mg/kg	08.19.19 12.54		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ISU			% Moisture:	
Analyst:	ISU	Date Prep:	08.21.19 16.18	Basis:	Wet Weight
Seq Number:	3099327			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**51.6**	50.0	9.99	mg/kg	08.22.19 04.15		1
Diesel Range Organics (DRO)	C10C28DRO	**331**	50.0	9.99	mg/kg	08.22.19 04.15		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**49.0**	50.0	9.99	mg/kg	08.22.19 04.15	J	1
Total TPH	PHC635	**432**	50.0	9.99	mg/kg	08.22.19 04.15		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	08.22.19 04.15	
o-Terphenyl	84-15-1	103	%	70-135	08.22.19 04.15	

Certificate of Analytical Results 634272

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road Release

Sample Id: **SP-1**
Lab Sample Id: 634272-029

Matrix: Soil
Date Collected: 08.14.19 15.30

Date Received:08.16.19 16.33

Analytical Method: BTEX by EPA 8021B
Tech: MIT
Analyst: MIT
Seq Number: 3099287

Date Prep: 08.21.19 12.00

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00886	0.0196	0.00886	mg/kg	08.21.19 19.00	U	1
Toluene	108-88-3	**0.00588**	0.0196	0.00459	mg/kg	08.21.19 19.00	J	1
Ethylbenzene	100-41-4	<0.00604	0.0196	0.00604	mg/kg	08.21.19 19.00	U	1
m,p-Xylenes	179601-23-1	<0.00669	0.0392	0.00669	mg/kg	08.21.19 19.00	U	1
o-Xylene	95-47-6	<0.00669	0.0196	0.00669	mg/kg	08.21.19 19.00	U	1
Total Xylenes	1330-20-7	<0.00669	0.0196	0.00669	mg/kg	08.21.19 19.00	U	1
Total BTEX		**0.00588**	0.0196	0.00459	mg/kg	08.21.19 19.00	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	98	%	68-120	08.21.19 19.00	
a,a,a-Trifluorotoluene	98-08-8	109	%	71-121	08.21.19 19.00	

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.

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 634272

Terracon-Lubbock

Rock Daisy Road Release

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Seq Number: 3098953 Matrix: Solid Date Prep: 08.19.19
MB Sample Id: 7684475-1-BLK LCS Sample Id: 7684475-1-BKS LCSD Sample Id: 7684475-1-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	101	101	102	102	80-120	1	20	mg/kg	08.19.19 09:44	

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Seq Number: 3098934 Matrix: Solid Date Prep: 08.19.19
MB Sample Id: 7684474-1-BLK LCS Sample Id: 7684474-1-BKS LCSD Sample Id: 7684474-1-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	102	102	103	103	80-120	1	20	mg/kg	08.19.19 12:13	

Analytical Method: Chloride by EPA 300 Prep Method: SW9056P
Seq Number: 3099545 Matrix: Solid Date Prep: 08.23.19
MB Sample Id: 7684863-1-BLK LCS Sample Id: 7684863-1-BKS LCSD Sample Id: 7684863-1-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	105	105	105	105	80-120	0	20	mg/kg	08.23.19 16:56	

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Seq Number: 3098953 Matrix: Soil Date Prep: 08.19.19
Parent Sample Id: 634272-012 MS Sample Id: 634272-012 S MSD Sample Id: 634272-012 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2240	100	2290	50	2290	50	80-120	0	20	mg/kg	08.19.19 13:27	X

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Seq Number: 3098953 Matrix: Soil Date Prep: 08.19.19
Parent Sample Id: 634272-020 MS Sample Id: 634272-020 S MSD Sample Id: 634272-020 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1430	99.8	1490	60	1490	60	80-120	0	20	mg/kg	08.19.19 15:32	X

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 634272

Terracon-Lubbock

Rock Daisy Road Release

Analytical Method: Chloride by EPA 300 — Prep Method: E300P

Seq Number: 3098934 — Matrix: Soil — Date Prep: 08.19.19

Parent Sample Id: 634272-028 — MS Sample Id: 634272-028 S — MSD Sample Id: 634272-028 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	77.2	99.8	170	93	171	94	80-120	1	20	mg/kg	08.19.19 12:38	

Analytical Method: Chloride by EPA 300 — Prep Method: SW9056P

Seq Number: 3098934 — Matrix: Soil — Date Prep: 08.19.19

Parent Sample Id: 634392-007 — MS Sample Id: 634392-007 S — MSD Sample Id: 634392-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	23.7	118	139	98	139	98	80-120	0	20	mg/kg	08.19.19 14:01	

Analytical Method: Chloride by EPA 300 — Prep Method: SW9056P

Seq Number: 3099545 — Matrix: Soil — Date Prep: 08.23.19

Parent Sample Id: 634827-001 — MS Sample Id: 634827-001 S — MSD Sample Id: 634827-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	13.1	100	113	100	114	101	80-120	1	20	mg/kg	08.23.19 17:21	

Analytical Method: TPH By SW8015 Mod — Prep Method: TX1005P

Seq Number: 3099315 — Matrix: Solid — Date Prep: 08.21.19

MB Sample Id: 7684636-1-BLK — LCS Sample Id: 7684636-1-BKS — LCSD Sample Id: 7684636-1-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	937	94	957	96	70-135	2	35	mg/kg	08.21.19 13:14	
Diesel Range Organics (DRO)	<10.0	1000	946	95	965	97	70-135	2	35	mg/kg	08.21.19 13:14	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	106		114		117		70-135	%	08.21.19 13:14
o-Terphenyl	120		110		114		70-135	%	08.21.19 13:14

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 634272

Terracon-Lubbock

Rock Daisy Road Release

Analytical Method: TPH By SW8015 Mod Prep Method: TX1005P
Seq Number: 3099327 Matrix: Solid Date Prep: 08.21.19
MB Sample Id: 7684707-1-BLK LCS Sample Id: 7684707-1-BKS LCSD Sample Id: 7684707-1-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	1120	112	991	99	70-135	12	35	mg/kg	08.22.19 03:37	
Diesel Range Organics (DRO)	<10.0	1000	1160	116	1020	102	70-135	13	35	mg/kg	08.22.19 03:37	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	114		141	**	121		70-135	%	08.22.19 03:37
o-Terphenyl	132		136	**	118		70-135	%	08.22.19 03:37

Analytical Method: TPH By SW8015 Mod Prep Method: TX1005P
Seq Number: 3099315 Matrix: Soil Date Prep: 08.21.19
Parent Sample Id: 634272-001 MS Sample Id: 634272-001 S MSD Sample Id: 634272-001 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)	<9.96	996	975	98	912	92	70-135	7	35	mg/kg	08.21.19 13:51	
Diesel Range Organics (DRO)	<9.96	996	895	90	846	85	70-135	6	35	mg/kg	08.21.19 13:51	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	110		98		70-135	%	08.21.19 13:51
o-Terphenyl	102		94		70-135	%	08.21.19 13:51

Analytical Method: TPH By SW8015 Mod Prep Method: TX1005P
Seq Number: 3099327 Matrix: Soil Date Prep: 08.21.19
Parent Sample Id: 634272-028 MS Sample Id: 634272-028 S MSD Sample Id: 634272-028 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)	<9.94	994	1060	107	1010	102	70-135	5	35	mg/kg	08.22.19 03:37	
Diesel Range Organics (DRO)	<9.94	994	986	99	964	97	70-135	2	35	mg/kg	08.22.19 03:37	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	108		106		70-135	%	08.22.19 03:37
o-Terphenyl	102		103		70-135	%	08.22.19 03:37

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 634272

Terracon-Lubbock

Rock Daisy Road Release

Analytical Method: TPH By SW8015 Mod — Prep Method: TX1005P

Seq Number: 3100243 — Matrix: Soil — Date Prep: 08.28.19

Parent Sample Id: 634272-004 — MS Sample Id: 634272-004 S — MSD Sample Id: 634272-004 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)	12.2	997	1020	101	1020	102	70-135	0	35	mg/kg	08.29.19 23:03	
Diesel Range Organics (DRO)	20.5	997	1030	101	1030	102	70-135	0	35	mg/kg	08.29.19 23:03	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	101		100		70-135	%	08.29.19 23:03
o-Terphenyl	100		101		70-135	%	08.29.19 23:03

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B

Seq Number: 3099287 — Matrix: Solid — Date Prep: 08.21.19

MB Sample Id: 7684751-1-BLK — LCS Sample Id: 7684751-1-BKS — LCSD Sample Id: 7684751-1-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	1.94	97	1.99	100	55-120	3	20	mg/kg	08.21.19 16:36	
Toluene	<0.00468	2.00	2.01	101	1.98	99	77-120	2	20	mg/kg	08.21.19 16:36	
Ethylbenzene	<0.00616	2.00	2.18	109	2.08	104	77-120	5	20	mg/kg	08.21.19 16:36	
m,p-Xylenes	<0.00682	4.00	4.26	107	4.07	102	78-120	5	20	mg/kg	08.21.19 16:36	
o-Xylene	<0.00682	2.00	2.13	107	2.06	103	78-120	3	20	mg/kg	08.21.19 16:36	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	91		105		99		68-120	%	08.21.19 16:36
a,a,a-Trifluorotoluene	95		105		106		71-121	%	08.21.19 16:36

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B

Seq Number: 3099291 — Matrix: Solid — Date Prep: 08.21.19

MB Sample Id: 7684747-1-BLK — LCS Sample Id: 7684747-1-BKS — LCSD Sample Id: 7684747-1-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	1.80	90	1.72	86	55-120	5	20	mg/kg	08.21.19 17:41	
Toluene	<0.00468	2.00	1.88	94	1.82	91	77-120	3	20	mg/kg	08.21.19 17:41	
Ethylbenzene	<0.00616	2.00	1.86	93	1.83	92	77-120	2	20	mg/kg	08.21.19 17:41	
m,p-Xylenes	<0.00682	4.00	3.69	92	3.66	92	78-120	1	20	mg/kg	08.21.19 17:41	
o-Xylene	<0.00682	2.00	1.83	92	1.85	93	78-120	1	20	mg/kg	08.21.19 17:41	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	87		90		91		68-120	%	08.21.19 17:41
a,a,a-Trifluorotoluene	90		80		79		71-121	%	08.21.19 17:41

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

XENCO LABORATORIES

QC Summary 634272

Terracon-Lubbock

Rock Daisy Road Release

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
Seq Number: 3099287 Matrix: Soil Date Prep: 08.21.19
Parent Sample Id: 634230-001 MS Sample Id: 634230-001 S MSD Sample Id: 634230-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.0180	3.98	1.81	45	1.74	45	54-120	4	25	mg/kg	08.21.19 19:48	X
Toluene	0.0102	3.98	1.90	47	1.84	47	57-120	3	25	mg/kg	08.21.19 19:48	X
Ethylbenzene	<0.0122	3.98	2.05	52	2.01	51	58-131	2	25	mg/kg	08.21.19 19:48	X
m,p-Xylenes	0.0716	7.95	4.10	51	3.97	50	62-124	3	25	mg/kg	08.21.19 19:48	X
o-Xylene	0.0613	3.98	2.08	51	2.05	51	62-124	1	25	mg/kg	08.21.19 19:48	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	93		106		68-120	%	08.21.19 19:48
a,a,a-Trifluorotoluene	87		106		71-121	%	08.21.19 19:48

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
Seq Number: 3099291 Matrix: Soil Date Prep: 08.21.19
Parent Sample Id: 634272-001 MS Sample Id: 634272-001 S MSD Sample Id: 634272-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00902	2.00	1.61	81	1.61	82	54-120	0	25	mg/kg	08.21.19 20:23	
Toluene	<0.00467	2.00	1.80	90	1.81	92	57-120	1	25	mg/kg	08.21.19 20:23	
Ethylbenzene	<0.00615	2.00	1.88	94	1.90	96	58-131	1	25	mg/kg	08.21.19 20:23	
m,p-Xylenes	0.0245	3.99	3.80	95	3.82	96	62-124	1	25	mg/kg	08.21.19 20:23	
o-Xylene	<0.00681	2.00	1.89	95	1.90	96	62-124	1	25	mg/kg	08.21.19 20:23	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	92		93		68-120	%	08.21.19 20:23
a,a,a-Trifluorotoluene	82		83		71-121	%	08.21.19 20:23

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	

634272

634272

CHAIN OF CUSTODY RECORD

Terracon

Office Location: Lubbock
Project Manager: Joseph Guesnier
Sampler's Name: Joseph Guesnier

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

LAB USE ONLY
DUE DATE:
TEMP OF COOLER WHEN RECEIVED (°C): 3.4/3.5
Page 1 of 2

Project Number: AR197270
Project Name: Rock Daisy Road Release

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	2 oz Glass	4 oz Glass	5035 kit	40 ml VOA	Chloride (EPA Method 300)	TPH Extended 8015	BTEX (EPA Method 8021B)	Hold	Lab Sample ID
S	8/14/2019	11:45		X	HA-1 (0-0.5)	0'	0.5'		X			X	X	X		1
S	8/14/2019	11:50		X	HA-1 (0.5-1)	0.5'	1'		X			X	X	X		2
S	8/14/2019	11:55		X	HA-1 (1.5-2)	1.5'	2'		X			X	X	X		3
S	8/14/2019	12:00		X	HA-1 (3.5-4)R	3.5'	4'		X			X			X	4
S	8/14/2019	12:05		X	HA-2 (0-0.5)	0'	0.5'		X			X	X	X		5
S	8/14/2019	12:10		X	HA-2 (0.5-1)	0.5'	1'		X			X	X	X		6
S	8/14/2019	12:15		X	HA-2 (1.5-2)	1.5'	2'		X			X	X	X		7
S	8/14/2019	12:20		X	HA-2 (3.5-4)	3.5'	4'		X			X			X	8
S	8/14/2019	12:25		X	HA-2 (4.5-5)	4.5'	5'		X			X			X	9
S	8/14/2019	12:30		X	HA-3 (0-0.5)	0'	0.5'		X			X	X	X		10
S	8/14/2019	12:35		X	HA-3 (0.5-1)	0.5'	1'		X			X	X	X		11
S	8/14/2019	12:40		X	HA-3 (1.5-2)	1.5'	2'		X			X	X	X		12
S	8/14/2019	12:45		X	HA-4 (0-0.5)	0'	0.5'		X			X	X	X		13
S	8/14/2019	12:50		X	HA-4 (0.5-1)	0.5'	1'		X			X	X	X		14
S	8/14/2019	12:55		X	HA-4 (1.5-2)	1.5'	2'		X			X	X	X		15
S	8/14/2019	13:00		X	HA-4 (3.5-4)	3.5'	4'		X			X			X	16
S	8/14/2019	13:05		X	HA-4 (4.5-5)	4.5'	5'		X			X			X	17

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
Relinquished by (Signature)	8-15-19	4:38	Received by (Signature)	8/15/19	4:33
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: Solaris

e-mail results to:
john.fergerson@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

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

Terracon

CHAIN OF CUSTODY RECORD

Office Location: Lubbock
Project Manager: Joseph Guesnier
Sampler's Name: Joseph Guesnier

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

LAB USE ONLY
DUE DATE:
TEMP OF COOLER WHEN RECEIVED (°C): 3.4/3.5

Page 2 of 2

Project Number: AR197270
Project Name: Rock Daisy Road Release

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	2 oz Glass	4 oz Glass	5035 kit	40 ml VOA	Chloride (EPA Method 300)	TPH Extended 8015	BTEX (EPA Method 8021B)	Hold	Lab Sample ID
S	8/14/2019	13:10		X	HA-5 (0-0.5)	0'	0.5'		X			X	X	X		18
S	8/14/2019	13:15		X	HA-5 (0.5-1)	0.5'	1'		X			X	X	X		19
S	8/14/2019	13:20		X	HA-5 (1.5-2)	1.5'	2'		X			X	X	X		20
S	8/14/2019	13:25		X	HA-6 (0-0.5)	0'	0.5'		X			X	X	X		21
S	8/14/2019	13:30		X	HA-6 (0.5-1)	0.5'	1'		X			X	X	X		22
S	8/14/2019	13:35		X	HA-6 (1.5-2)	1.5'	2'		X			X	X	X		23
S	8/14/2019	13:40		X	HA-6 (3.5-4)	3.5'	4'		X			X			X	24
S	8/14/2019	13:45		X	HA-6 (4.5-5)	4.5'	5'		X			X			X	25
S	8/14/2019	13:50		X	HA-7 (0-0.5)	0'	0.5'		X			X	X	X		26
S	8/14/2019	13:55		X	HA-7 (0.5-1)	0.5'	1'		X			X	X	X		27
S	8/14/2019	14:00		X	HA-7 (1.5-2)	1.5'	2'		X			X	X	X		28
S	8/14/2019	15:30	X		SP-1				X			X	X	X		29

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
Relinquished by (Signature)	8-15-19	4:33	Received by (Signature)		
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	8-15-19	4:33
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:

NOTES: Client: Spur

e-mail results to:

john.fergerson@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

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

XENCO LABORATORIES

Inter-Office Shipment

IOS Number **46433**

Date/Time: 08/16/19 10:43 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.: 776010155026 E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
634272-001	S	HA-1 (0-0.5)	08/14/19 11:45	E300_CL	Chloride by EPA 300	**08/22/19**	02/10/20	JKR	CL	
634272-001	S	HA-1 (0-0.5)	08/14/19 11:45	SW8015MOD_NM	TPH By SW8015 Mod	**08/22/19**	**08/28/19 11:45**	JKR	PHCC10C28 PHCC28C35	
634272-002	S	HA-1 (0.5-1)	08/14/19 11:50	E300_CL	Chloride by EPA 300	**08/22/19**	02/10/20	JKR	CL	
634272-002	S	HA-1 (0.5-1)	08/14/19 11:50	SW8015MOD_NM	TPH By SW8015 Mod	**08/22/19**	**08/28/19 11:50**	JKR	PHCC10C28 PHCC28C35	
634272-003	S	HA-1 (1.5-2)	08/14/19 11:55	E300_CL	Chloride by EPA 300	**08/22/19**	02/10/20	JKR	CL	
634272-003	S	HA-1 (1.5-2)	08/14/19 11:55	SW8015MOD_NM	TPH By SW8015 Mod	**08/22/19**	**08/28/19 11:55**	JKR	PHCC10C28 PHCC28C35	
634272-004	S	HA-1 (3.5-4R)	08/14/19 12:00	SW8015MOD_NM	TPH By SW8015 Mod	**08/27/19**	**08/28/19 12:00**	JKR	PHCC10C28 PHCC28C35	
634272-004	S	HA-1 (3.5-4R)	08/14/19 12:00	E300_CL	Chloride by EPA 300	**08/27/19**	02/10/20	JKR	CL	
634272-005	S	HA-2 (0-0.5)	08/14/19 12:05	SW8015MOD_NM	TPH By SW8015 Mod	**08/22/19**	**08/28/19 12:05**	JKR	PHCC10C28 PHCC28C35	
634272-005	S	HA-2 (0-0.5)	08/14/19 12:05	E300_CL	Chloride by EPA 300	**08/22/19**	02/10/20	JKR	CL	
634272-006	S	HA-2 (0.5-1)	08/14/19 12:10	SW8015MOD_NM	TPH By SW8015 Mod	**08/22/19**	**08/28/19 12:10**	JKR	PHCC10C28 PHCC28C35	
634272-006	S	HA-2 (0.5-1)	08/14/19 12:10	E300_CL	Chloride by EPA 300	**08/22/19**	02/10/20	JKR	CL	
634272-007	S	HA-2 (1.5-2)	08/14/19 12:15	E300_CL	Chloride by EPA 300	**08/22/19**	02/10/20	JKR	CL	
634272-007	S	HA-2 (1.5-2)	08/14/19 12:15	SW8015MOD_NM	TPH By SW8015 Mod	**08/22/19**	**08/28/19 12:15**	JKR	PHCC10C28 PHCC28C35	
634272-008	S	HA-2 (3.5-4)	08/14/19 12:20	E300_CL	Chloride by EPA 300	**08/27/19**	02/10/20	JKR	CL	
634272-008	S	HA-2 (3.5-4)	08/14/19 12:20	SW8015MOD_NM	TPH By SW8015 Mod	**08/27/19**	**08/28/19 12:20**	JKR	PHCC10C28 PHCC28C35	
634272-009	S	HA-2 (4.5-5)	08/14/19 12:25	E300_CL	Chloride by EPA 300	**08/27/19**	02/10/20	JKR	CL	
634272-010	S	HA-3 (0-0.5)	08/14/19 12:30	SW8015MOD_NM	TPH By SW8015 Mod	**08/22/19**	**08/28/19 12:30**	JKR	PHCC10C28 PHCC28C35	
634272-010	S	HA-3 (0-0.5)	08/14/19 12:30	E300_CL	Chloride by EPA 300	**08/22/19**	02/10/20	JKR	CL	
634272-011	S	HA-3 (0.5-1)	08/14/19 12:35	SW8015MOD_NM	TPH By SW8015 Mod	**08/22/19**	**08/28/19 12:35**	JKR	PHCC10C28 PHCC28C35	
634272-011	S	HA-3 (0.5-1)	08/14/19 12:35	E300_CL	Chloride by EPA 300	**08/22/19**	02/10/20	JKR	CL	
634272-012	S	HA-3 (1.5-2)	08/14/19 12:40	E300_CL	Chloride by EPA 300	**08/22/19**	02/10/20	JKR	CL	
634272-012	S	HA-3 (1.5-2)	08/14/19 12:40	SW8015MOD_NM	TPH By SW8015 Mod	**08/22/19**	**08/28/19 12:40**	JKR	PHCC10C28 PHCC28C35	
634272-013	S	HA-4 (0-0.5)	08/14/19 12:45	E300_CL	Chloride by EPA 300	**08/22/19**	02/10/20	JKR	CL	
634272-013	S	HA-4 (0-0.5)	08/14/19 12:45	SW8015MOD_NM	TPH By SW8015 Mod	**08/22/19**	**08/28/19 12:45**	JKR	PHCC10C28 PHCC28C35	

XENCO LABORATORIES

Inter-Office Shipment

IOS Number **46433**

Date/Time: 08/16/19 10:43 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.: 776010155026 E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
634272-014	S	HA-4 (0.5-1)	08/14/19 12:50	E300_CL	Chloride by EPA 300	08/22/19	02/10/20	JKR	CL	
634272-014	S	HA-4 (0.5-1)	08/14/19 12:50	SW8015MOD_NM	TPH By SW8015 Mod	08/22/19	08/28/19 12:50	JKR	PHCC10C28 PHCC28C35	
634272-015	S	HA-4 (1.5-2)	08/14/19 12:55	SW8015MOD_NM	TPH By SW8015 Mod	08/22/19	08/28/19 12:55	JKR	PHCC10C28 PHCC28C35	
634272-015	S	HA-4 (1.5-2)	08/14/19 12:55	E300_CL	Chloride by EPA 300	08/22/19	02/10/20	JKR	CL	
634272-016	S	HA-4 (3.5-4)	08/14/19 13:00	E300_CL	Chloride by EPA 300	08/27/19	02/10/20	JKR	CL	
634272-016	S	HA-4 (3.5-4)	08/14/19 13:00	SW8015MOD_NM	TPH By SW8015 Mod	08/27/19	08/28/19 13:00	JKR	PHCC10C28 PHCC28C35	
634272-017	S	HA-4 (4.5-5)	08/14/19 13:05	E300_CL	Chloride by EPA 300	08/27/19	02/10/20	JKR	CL	
634272-018	S	HA-5 (0-0.5)	08/14/19 13:10	SW8015MOD_NM	TPH By SW8015 Mod	08/22/19	08/28/19 13:10	JKR	PHCC10C28 PHCC28C35	
634272-018	S	HA-5 (0-0.5)	08/14/19 13:10	E300_CL	Chloride by EPA 300	08/22/19	02/10/20	JKR	CL	
634272-019	S	HA-5 (0.5-1)	08/14/19 13:15	SW8015MOD_NM	TPH By SW8015 Mod	08/22/19	08/28/19 13:15	JKR	PHCC10C28 PHCC28C35	
634272-019	S	HA-5 (0.5-1)	08/14/19 13:15	E300_CL	Chloride by EPA 300	08/22/19	02/10/20	JKR	CL	
634272-020	S	HA-5 (1.5-2)	08/14/19 13:20	E300_CL	Chloride by EPA 300	08/22/19	02/10/20	JKR	CL	
634272-020	S	HA-5 (1.5-2)	08/14/19 13:20	SW8015MOD_NM	TPH By SW8015 Mod	08/22/19	08/28/19 13:20	JKR	PHCC10C28 PHCC28C35	
634272-021	S	HA-6 (0-0.5)	08/14/19 13:25	E300_CL	Chloride by EPA 300	08/22/19	02/10/20	JKR	CL	
634272-021	S	HA-6 (0-0.5)	08/14/19 13:25	SW8015MOD_NM	TPH By SW8015 Mod	08/22/19	08/28/19 13:25	JKR	PHCC10C28 PHCC28C35	
634272-022	S	HA-6 (0.5-1)	08/14/19 13:30	SW8015MOD_NM	TPH By SW8015 Mod	08/22/19	08/28/19 13:30	JKR	PHCC10C28 PHCC28C35	
634272-022	S	HA-6 (0.5-1)	08/14/19 13:30	E300_CL	Chloride by EPA 300	08/22/19	02/10/20	JKR	CL	
634272-023	S	HA-6 (1.5-2)	08/14/19 13:35	SW8015MOD_NM	TPH By SW8015 Mod	08/22/19	08/28/19 13:35	JKR	PHCC10C28 PHCC28C35	
634272-023	S	HA-6 (1.5-2)	08/14/19 13:35	E300_CL	Chloride by EPA 300	08/22/19	02/10/20	JKR	CL	
634272-024	S	HA-6 (3.5-4)	08/14/19 13:40	SW8015MOD_NM	TPH By SW8015 Mod	08/27/19	08/28/19 13:40	JKR	PHCC10C28 PHCC28C35	
634272-024	S	HA-6 (3.5-4)	08/14/19 13:40	E300_CL	Chloride by EPA 300	08/27/19	02/10/20	JKR	CL	
634272-025	S	HA-6 (4.5-5)	08/14/19 13:45	E300_CL	Chloride by EPA 300	08/27/19	02/10/20	JKR	CL	
634272-026	S	HA-7 (0-0.5)	08/14/19 13:50	SW8015MOD_NM	TPH By SW8015 Mod	08/22/19	08/28/19 13:50	JKR	PHCC10C28 PHCC28C35	
634272-026	S	HA-7 (0-0.5)	08/14/19 13:50	E300_CL	Chloride by EPA 300	08/22/19	02/10/20	JKR	CL	
634272-027	S	HA-7 (0.5-1)	08/14/19 13:55	SW8015MOD_NM	TPH By SW8015 Mod	08/22/19	08/28/19 13:55	JKR	PHCC10C28 PHCC28C35	

Inter Office Shipment or Sample Comments:

XENCO LABORATORIES

Inter-Office Shipment

IOS Number **46433**

Date/Time: 08/16/19 10:43

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.: 776010155026

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
634272-027	S	HA-7 (0.5-1)	08/14/19 13:55	E300_CL	Chloride by EPA 300	**08/22/19**	02/10/20	JKR	CL	
634272-028	S	HA-7 (1.5-2)	08/14/19 14:00	SW8015MOD_NM	TPH By SW8015 Mod	**08/22/19**	**08/28/19 14:00**	JKR	PHCC10C28 PHCC28C35	
634272-028	S	HA-7 (1.5-2)	08/14/19 14:00	E300_CL	Chloride by EPA 300	**08/22/19**	02/10/20	JKR	CL	
634272-029	S	SP-1	08/14/19 15:30	SW8015MOD_NM	TPH By SW8015 Mod	**08/22/19**	**08/28/19 15:30**	JKR	PHCC10C28 PHCC28C35	
634272-029	S	SP-1	08/14/19 15:30	E300_CL	Chloride by EPA 300	**08/22/19**	02/10/20	JKR	CL	

Inter Office Shipment or Sample Comments:

Relinquished By: Brenda Ward

Brenda Ward

Date Relinquished: 08/16/2019

Received By:

Ashly Kowalski

Date Received: 08/17/2019 09:30

Cooler Temperature: 4.3

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Houston
IOS #: 46433

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used : HOU-068

Sent By: Brenda Ward **Date Sent:** 08/16/2019 10:43 AM
Received By: Ashly Kowalski **Date Received:** 08/17/2019 09:30 AM

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	4.3	
#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: Ashly Kowalski Date: 08/17/2019

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: Terracon-Lubbock

Date/ Time Received: 08/16/2019 04:33:00 PM

Work Order #: 634272

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)?	3.5	
#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**	Chlorides and SW8015 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
Brenda Ward
Date: 08/16/2019

Checklist reviewed by: Kelsey Brooks
Kelsey Brooks
Date: 08/22/2019

XENCO LABORATORIES

Certificate of Analysis Summary 641026

Terracon-Lubbock, Lubbock, TX

Project Name: Rock Daisy Road

Project Id: AR197270
Contact: Joseph Guesnier
Project Location: Spur

Date Received in Lab: Thu Oct-24-19 04:53 pm
Report Date: 28-OCT-19
Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	641026-001		641026-002		641026-003		641026-004			
	Field Id:	CS-1.0 (0-0.5)		CS-2.0 (2-2.5)		CS-3.0 (0-0.5)		CS-4.0 (2-2.5)			
	Depth:	0-0.5 ft		2-2.5 ft		0-0.5 ft		2-2.5 ft			
	Matrix:	SOIL		SOIL		SOIL		SOIL			
	Sampled:	Oct-21-19 14:00		Oct-21-19 14:10		Oct-21-19 14:20		Oct-21-19 14:30			
BTEX by EPA 8021B	*Extracted:*	Oct-25-19 11:30		Oct-25-19 11:30		Oct-25-19 11:30		Oct-25-19 11:30			
	Analyzed:	Oct-25-19 16:41		Oct-25-19 18:18		Oct-25-19 18:42		Oct-25-19 19:06			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Benzene		<0.00900	0.0199	<0.00885	0.0196	<0.00807	0.0179	<0.00873	0.0193		
Toluene		<0.00466	0.0199	<0.00458	0.0196	<0.00418	0.0179	<0.00452	0.0193		
Ethylbenzene		<0.00614	0.0199	<0.00603	0.0196	<0.00550	0.0179	<0.00595	0.0193		
m,p-Xylenes		<0.00679	0.0398	<0.00667	0.0391	<0.00609	0.0357	<0.00658	0.0386		
o-Xylene		<0.00679	0.0199	<0.00667	0.0196	<0.00609	0.0179	<0.00658	0.0193		
Total Xylenes		<0.00679	0.0199	<0.00667	0.0196	<0.00609	0.0179	<0.00658	0.0193		
Total BTEX		<0.00466	0.0199	<0.00458	0.0196	<0.00418	0.0179	<0.00452	0.0193		
Chloride by EPA 300	*Extracted:*	Oct-28-19 08:30		Oct-28-19 08:30		Oct-28-19 08:30		Oct-28-19 08:30			
	Analyzed:	Oct-28-19 10:23		Oct-28-19 11:13		Oct-28-19 11:37		Oct-28-19 12:02			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Chloride		56.9	25.0	1220 D	125	759 D	125	39.3	25.0		
TPH By SW8015 Mod SUB: T104704215-19-30	*Extracted:*	Oct-25-19 15:49		Oct-25-19 15:58		Oct-25-19 16:01		Oct-25-19 16:04			
	Analyzed:	Oct-25-19 17:49		Oct-25-19 18:45		Oct-25-19 19:03		Oct-25-19 19:22			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Gasoline Range Hydrocarbons (GRO)		<9.91	49.6	<9.96	49.8	<9.97	49.9	<9.94	49.7		
Diesel Range Organics (DRO)		<9.91	49.6	<9.96	49.8	<9.97	49.9	<9.94	49.7		
Motor Oil Range Hydrocarbons (MRO)		<9.91	49.6	<9.96	49.8	<9.97	49.9	<9.94	49.7		
Total TPH		<9.91	49.6	<9.96	49.8	<9.97	49.9	<9.94	49.7		

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

Version: 1.%

Jessica Kramer

Jessica Kramer
Project Assistant

Analytical Report 641026

for

Terracon-Lubbock

Project Manager: Joseph Guesnier

Rock Daisy Road

AR197270

28-OCT-19

Collected By: Client

6701 Aberdeen, Suite 9 Lubbock, TX 79424

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142), North Carolina (681)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

28-OCT-19

Project Manager: **Joseph Guesnier**
Terracon-Lubbock
5827 50th st, Suite 1
Lubbock, TX 79424

Reference: XENCO Report No(s): **641026**
Rock Daisy Road
Project Address: 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) 641026. 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. 641026 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 Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

Sample Cross Reference 641026

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
CS-1.0 (0-0.5)	S	10-21-19 14:00	0 - 0.5 ft	641026-001
CS-2.0 (2-2.5)	S	10-21-19 14:10	2 - 2.5 ft	641026-002
CS-3.0 (0-0.5)	S	10-21-19 14:20	0 - 0.5 ft	641026-003
CS-4.0 (2-2.5)	S	10-21-19 14:30	2 - 2.5 ft	641026-004

Version: 1.%

CASE NARRATIVE

Client Name: Terracon-Lubbock
Project Name: Rock Daisy Road

Project ID:	*AR197270*	Report Date:	*28-OCT-19*
Work Order Number(s):	*641026*	Date Received:	*10/24/2019*

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:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3105568 BTEX by EPA 8021B

Surrogate a,a,a-Trifluorotoluene recovered above QC limits Data confirmed by re-analysis. Samples affected are: 7688899-1-BLK.

Surrogate 4-Bromofluorobenzene recovered above QC limits Data confirmed by re-analysis. Samples affected are: 7688899-1-BLK,7688899-1-BSD,641026-002,641026-003.

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analytical Results 641026

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id: **CS-1.0 (0-0.5)**
Lab Sample Id: 641026-001
Matrix: Soil
Date Collected: 10.21.19 14.00
Date Received: 10.24.19 16.53
Sample Depth: 0 - 0.5 ft

Analytical Method: Chloride by EPA 300
Tech: RNL
Analyst: RNL
Seq Number: 3105600
Date Prep: 10.28.19 08.30
Prep Method: E300P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**56.9**	25.0	0.572	mg/kg	10.28.19 10.23		1

Analytical Method: TPH By SW8015 Mod
Tech: ISU
Analyst: ISU
Seq Number: 3105592
Date Prep: 10.25.19 15.49
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	<9.91	49.6	9.91	mg/kg	10.25.19 17.49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<9.91	49.6	9.91	mg/kg	10.25.19 17.49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<9.91	49.6	9.91	mg/kg	10.25.19 17.49	U	1
Total TPH	PHC635	<9.91	49.6	9.91	mg/kg	10.25.19 17.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	10.25.19 17.49	
o-Terphenyl	84-15-1	98	%	70-135	10.25.19 17.49	

Certificate of Analytical Results 641026

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id:	**CS-1.0 (0-0.5)**	Matrix:	Soil	Date Received:	10.24.19 16.53
Lab Sample Id:	641026-001	Date Collected:	10.21.19 14.00	Sample Depth:	0 - 0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	10.25.19 11.30	Basis:	Wet Weight
Seq Number:	3105568				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00900	0.0199	0.00900	mg/kg	10.25.19 16.41	U	1
Toluene	108-88-3	<0.00466	0.0199	0.00466	mg/kg	10.25.19 16.41	U	1
Ethylbenzene	100-41-4	<0.00614	0.0199	0.00614	mg/kg	10.25.19 16.41	U	1
m,p-Xylenes	179601-23-1	<0.00679	0.0398	0.00679	mg/kg	10.25.19 16.41	U	1
o-Xylene	95-47-6	<0.00679	0.0199	0.00679	mg/kg	10.25.19 16.41	U	1
Total Xylenes	1330-20-7	<0.00679	0.0199	0.00679	mg/kg	10.25.19 16.41	U	1
Total BTEX		<0.00466	0.0199	0.00466	mg/kg	10.25.19 16.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	117	%	68-120	10.25.19 16.41	
a,a,a-Trifluorotoluene	98-08-8	119	%	71-121	10.25.19 16.41	

Certificate of Analytical Results 641026

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id: **CS-2.0 (2-2.5)**
Lab Sample Id: 641026-002
Matrix: Soil
Date Collected: 10.21.19 14.10
Date Received: 10.24.19 16.53
Sample Depth: 2 - 2.5 ft

Analytical Method: Chloride by EPA 300
Prep Method: E300P
Tech: RNL
% Moisture:
Analyst: RNL
Date Prep: 10.28.19 08.30
Basis: Wet Weight
Seq Number: 3105600

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1220**	125	2.86	mg/kg	10.28.19 11.25	D	5

Analytical Method: TPH By SW8015 Mod
Prep Method: SW8015P
Tech: ISU
% Moisture:
Analyst: ISU
Date Prep: 10.25.19 15.58
Basis: Wet Weight
Seq Number: 3105592
SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.96	49.8	9.96	mg/kg	10.25.19 18.45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<9.96	49.8	9.96	mg/kg	10.25.19 18.45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<9.96	49.8	9.96	mg/kg	10.25.19 18.45	U	1
Total TPH	PHC635	<9.96	49.8	9.96	mg/kg	10.25.19 18.45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	10.25.19 18.45	
o-Terphenyl	84-15-1	100	%	70-135	10.25.19 18.45	

Certificate of Analytical Results 641026

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id: **CS-2.0 (2-2.5)**
Lab Sample Id: 641026-002

Matrix: Soil
Date Collected: 10.21.19 14.10

Date Received: 10.24.19 16.53
Sample Depth: 2 - 2.5 ft

Analytical Method: BTEX by EPA 8021B
Tech: MIT
Analyst: MIT
Seq Number: 3105568

Date Prep: 10.25.19 11.30

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00885	0.0196	0.00885	mg/kg	10.25.19 18.18	U	1
Toluene	108-88-3	<0.00458	0.0196	0.00458	mg/kg	10.25.19 18.18	U	1
Ethylbenzene	100-41-4	<0.00603	0.0196	0.00603	mg/kg	10.25.19 18.18	U	1
m,p-Xylenes	179601-23-1	<0.00667	0.0391	0.00667	mg/kg	10.25.19 18.18	U	1
o-Xylene	95-47-6	<0.00667	0.0196	0.00667	mg/kg	10.25.19 18.18	U	1
Total Xylenes	1330-20-7	<0.00667	0.0196	0.00667	mg/kg	10.25.19 18.18	U	1
Total BTEX		<0.00458	0.0196	0.00458	mg/kg	10.25.19 18.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	122	%	68-120	10.25.19 18.18	**
a,a,a-Trifluorotoluene	98-08-8	119	%	71-121	10.25.19 18.18	

Certificate of Analytical Results 641026

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id: **CS-3.0 (0-0.5)**
Lab Sample Id: 641026-003

Matrix: Soil
Date Collected: 10.21.19 14.20

Date Received: 10.24.19 16.53
Sample Depth: 0 - 0.5 ft

Analytical Method: Chloride by EPA 300
Tech: RNL
Analyst: RNL
Seq Number: 3105600

Date Prep: 10.28.19 08.30

Prep Method: E300P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**759**	125	2.86	mg/kg	10.28.19 11.50	D	5

Analytical Method: TPH By SW8015 Mod
Tech: ISU
Analyst: ISU
Seq Number: 3105592

Date Prep: 10.25.19 16.01

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	<9.97	49.9	9.97	mg/kg	10.25.19 19.03	U	1
Diesel Range Organics (DRO)	C10C28DRO	<9.97	49.9	9.97	mg/kg	10.25.19 19.03	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<9.97	49.9	9.97	mg/kg	10.25.19 19.03	U	1
Total TPH	PHC635	<9.97	49.9	9.97	mg/kg	10.25.19 19.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	10.25.19 19.03	
o-Terphenyl	84-15-1	104	%	70-135	10.25.19 19.03	

Certificate of Analytical Results 641026

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id:	**CS-3.0 (0-0.5)**	Matrix:	Soil	Date Received:	10.24.19 16.53
Lab Sample Id:	641026-003	Date Collected:	10.21.19 14.20	Sample Depth:	0 - 0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	10.25.19 11.30	Basis:	Wet Weight
Seq Number:	3105568				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00807	0.0179	0.00807	mg/kg	10.25.19 18.42	U	1
Toluene	108-88-3	<0.00418	0.0179	0.00418	mg/kg	10.25.19 18.42	U	1
Ethylbenzene	100-41-4	<0.00550	0.0179	0.00550	mg/kg	10.25.19 18.42	U	1
m,p-Xylenes	179601-23-1	<0.00609	0.0357	0.00609	mg/kg	10.25.19 18.42	U	1
o-Xylene	95-47-6	<0.00609	0.0179	0.00609	mg/kg	10.25.19 18.42	U	1
Total Xylenes	1330-20-7	<0.00609	0.0179	0.00609	mg/kg	10.25.19 18.42	U	1
Total BTEX		<0.00418	0.0179	0.00418	mg/kg	10.25.19 18.42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	122	%	68-120	10.25.19 18.42	**
a,a,a-Trifluorotoluene	98-08-8	120	%	71-121	10.25.19 18.42	

XENCO LABORATORIES

Certificate of Analytical Results 641026

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id: **CS-4.0 (2-2.5)** Matrix: Soil Date Received: 10.24.19 16.53
Lab Sample Id: 641026-004 Date Collected: 10.21.19 14.30 Sample Depth: 2 - 2.5 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: RNL % Moisture:
Analyst: RNL Date Prep: 10.28.19 08.30 Basis: Wet Weight
Seq Number: 3105600

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**39.3**	25.0	0.572	mg/kg	10.28.19 12.02		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
Tech: ISU % Moisture:
Analyst: ISU Date Prep: 10.25.19 16.04 Basis: Wet Weight
Seq Number: 3105592 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	10.25.19 19.22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<9.94	49.7	9.94	mg/kg	10.25.19 19.22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<9.94	49.7	9.94	mg/kg	10.25.19 19.22	U	1
Total TPH	PHC635	<9.94	49.7	9.94	mg/kg	10.25.19 19.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	10.25.19 19.22	
o-Terphenyl	84-15-1	108	%	70-135	10.25.19 19.22	

Certificate of Analytical Results 641026

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id: **CS-4.0 (2-2.5)**
Lab Sample Id: 641026-004
Matrix: Soil
Date Collected: 10.21.19 14.30
Date Received: 10.24.19 16.53
Sample Depth: 2 - 2.5 ft

Analytical Method: BTEX by EPA 8021B
Prep Method: SW5030B
Tech: MIT
% Moisture:
Analyst: MIT
Date Prep: 10.25.19 11.30
Basis: Wet Weight
Seq Number: 3105568

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00873	0.0193	0.00873	mg/kg	10.25.19 19.06	U	1
Toluene	108-88-3	<0.00452	0.0193	0.00452	mg/kg	10.25.19 19.06	U	1
Ethylbenzene	100-41-4	<0.00595	0.0193	0.00595	mg/kg	10.25.19 19.06	U	1
m,p-Xylenes	179601-23-1	<0.00658	0.0386	0.00658	mg/kg	10.25.19 19.06	U	1
o-Xylene	95-47-6	<0.00658	0.0193	0.00658	mg/kg	10.25.19 19.06	U	1
Total Xylenes	1330-20-7	<0.00658	0.0193	0.00658	mg/kg	10.25.19 19.06	U	1
Total BTEX		<0.00452	0.0193	0.00452	mg/kg	10.25.19 19.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	118	%	68-120	10.25.19 19.06	
a,a,a-Trifluorotoluene	98-08-8	117	%	71-121	10.25.19 19.06	

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.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

Terracon-Lubbock

Rock Daisy Road

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Seq Number: 3105600 Matrix: Solid Date Prep: 10.28.19

MB Sample Id: 7689016-1-BLK LCS Sample Id: 7689016-1-BKS LCSD Sample Id: 7689016-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.572	250	232	93	236	94	90-110	2	20	mg/kg	10.28.19 09:58	

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Seq Number: 3105600 Matrix: Soil Date Prep: 10.28.19

Parent Sample Id: 641026-001 MS Sample Id: 641026-001 S MSD Sample Id: 641026-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	56.9	250	289	93	292	94	80-120	1	20	mg/kg	10.28.19 10:48	

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Seq Number: 3105592 Matrix: Solid Date Prep: 10.25.19

MB Sample Id: 7688924-1-BLK LCS Sample Id: 7688924-1-BKS LCSD Sample Id: 7688924-1-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	1090	109	1100	110	70-135	1	35	mg/kg	10.25.19 17:13	
Diesel Range Organics (DRO)	<10.0	1000	1040	104	1040	104	70-135	0	35	mg/kg	10.25.19 17:13	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	95		100		103		70-135	%	10.25.19 17:13
o-Terphenyl	97		93		95		70-135	%	10.25.19 17:13

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Seq Number: 3105592 Matrix: Solid Date Prep: 10.25.19

MB Sample Id: 7688924-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<10.0	mg/kg	10.25.19 16:54	

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 641026

Terracon-Lubbock
Rock Daisy Road

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3105592 — Matrix: Soil — Date Prep: 10.25.19
Parent Sample Id: 641026-001 — MS Sample Id: 641026-001 S — MSD Sample Id: 641026-001 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)	<9.97	997	1010	101	1030	104	70-135	2	35	mg/kg	10.28.19 14:02	
Diesel Range Organics (DRO)	<9.97	997	970	97	1000	101	70-135	3	35	mg/kg	10.28.19 14:02	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	99		102		70-135	%	10.28.19 14:02
o-Terphenyl	98		99		70-135	%	10.28.19 14:02

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3105568 — Matrix: Solid — Date Prep: 10.25.19
MB Sample Id: 7688899-1-BLK — LCS Sample Id: 7688899-1-BKS — LCSD Sample Id: 7688899-1-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	1.81	91	1.82	91	55-120	1	20	mg/kg	10.25.19 14:41	
Toluene	<0.00468	2.00	1.82	91	1.83	92	77-120	1	20	mg/kg	10.25.19 14:41	
Ethylbenzene	<0.00616	2.00	1.95	98	2.02	101	77-120	4	20	mg/kg	10.25.19 14:41	
m,p-Xylenes	<0.00682	4.00	3.97	99	4.06	102	78-120	2	20	mg/kg	10.25.19 14:41	
o-Xylene	<0.00682	2.00	2.01	101	2.04	102	78-120	1	20	mg/kg	10.25.19 14:41	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	121	**	92		121	**	68-120	%	10.25.19 14:41
a,a,a-Trifluorotoluene	123	**	86		111		71-121	%	10.25.19 14:41

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3105568 — Matrix: Soil — Date Prep: 10.25.19
Parent Sample Id: 641026-001 — MS Sample Id: 641026-001 S — MSD Sample Id: 641026-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00893	1.98	1.68	85	1.82	93	54-120	8	25	mg/kg	10.25.19 17:05	
Toluene	<0.00462	1.98	1.68	85	1.78	91	57-120	6	25	mg/kg	10.25.19 17:05	
Ethylbenzene	<0.00609	1.98	1.76	89	1.89	96	58-131	7	25	mg/kg	10.25.19 17:05	
m,p-Xylenes	<0.00674	3.95	3.57	90	3.82	97	62-124	7	25	mg/kg	10.25.19 17:05	
o-Xylene	<0.00674	1.98	1.77	89	1.92	98	62-124	8	25	mg/kg	10.25.19 17:05	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	120		118		68-120	%	10.25.19 17:05
a,a,a-Trifluorotoluene	120		119		71-121	%	10.25.19 17:05

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

6/10/24

6/10/24

Terracon

CHAIN OF CUSTODY RECORD

Office Location: Lubbock
Project Manager: Joseph Guesnier
Sampler's Name: Bryant McBrayer

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

LAB USE ONLY
DUE DATE:
TEMP OF COOLER WHEN RECEIVED (°C) 2.4/2.4
Page ____ of ___

Project Number: AR197270
Project Name: Rock Daisy Road

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	2 oz Glass	4 oz Glass	5035 kit	40 ml VOA	Chloride (EPA Method 300)	TPH Extended 8015	BTEX (EPA Method 8021B)	Hold				Lab Sample ID
S	10/21/2019	14:00	X		CS-1.0 (0-0.5)	0'	0.5'		X			X	X	X					
S	10/21/2019	14:10	X		CS-2.0 (2-2.5)	2'	2.5'		X			X	X	X					
S	10/21/2019	14:20	X		CS-3.0 (0-0.5)	0'	0.5'		X			X	X	X					
S	10/21/2019	14:30	X		CS-4.0 (2-2.5)	2'	2.5'		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
[signature]	10-24-19	4:53	Brenda Ward	10/24/19	4:53
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

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 ________

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

Inter-Office Shipment

IOS Number : 50813

Date/Time:	10.24.2019	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.:	776811354207	E-Mail:	jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
641026-001	S	CS-1.0 (0-0.5)	10.21.2019 14:00	SW8015MOD_NM	TPH By SW8015 Mod	10.28.2019	11.04.2019	JKR	PHCC10C28 PHCC28C35	
641026-002	S	CS-2.0 (2-2.5)	10.21.2019 14:10	SW8015MOD_NM	TPH By SW8015 Mod	10.28.2019	11.04.2019	JKR	PHCC10C28 PHCC28C35	
641026-003	S	CS-3.0 (0-0.5)	10.21.2019 14:20	SW8015MOD_NM	TPH By SW8015 Mod	10.28.2019	11.04.2019	JKR	PHCC10C28 PHCC28C35	
641026-004	S	CS-4.0 (2-2.5)	10.21.2019 14:30	SW8015MOD_NM	TPH By SW8015 Mod	10.28.2019	11.04.2019	JKR	PHCC10C28 PHCC28C35	

Inter Office Shipment or Sample Comments:

Relinquished By: Brenda Ward

Brenda Ward

Date Relinquished: 10.24.2019

Received By: Travis Simmons

Travis Simmons

Date Received: 10.25.2019

Cooler Temperature: 1.4

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 50813

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used : HOU-068

Sent By:	Brenda Ward	**Date Sent:**	10.24.2019 05.20 PM
Received By:	Travis Simmons	**Date Received:**	10.25.2019 09.45 AM

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	1.4	
#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: Travis Simmons (signature)
Travis Simmons

Date: 10.25.2019

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Terracon-Lubbock

Date/ Time Received: 10/24/2019 04:53:00 PM

Work Order #: 641026

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)?	2.6	
#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 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
Brenda Ward
Date: 10/24/2019

Checklist reviewed by: Jessica Kramer
Jessica Kramer
Date: 10/28/2019

XENCO LABORATORIES

Certificate of Analysis Summary 643378

Terracon-Lubbock, Lubbock, TX

Project Name: Rock Daisy Road

Project Id: AR197570
Contact: Joseph Guesnier
Project Location: Client: Spur

Date Received in Lab: Fri Nov-15-19 03:55 pm
Report Date: 27-NOV-19
Project Manager: Jessica Kramer

Analysis Requested		643378-001		643378-002		643378-003		643378-004		643378-005		643378-006	
	Lab Id:	643378-001		643378-002		643378-003		643378-004		643378-005		643378-006	
	Field Id:	CS-6.0 (0-0.5)		CS-7.0 (0-0.5)		CS-8.0 (0-0.5)		CS-9.0 (0-0.5)		CS-10.0 (0-0.5)		CS-11.0 (2.5-3)	
	Depth:	0-0.5 ft		0-0.5 ft		0-0.5 ft		0-0.5 ft		0-0.5 ft		2.5-3 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Nov-12-19 12:10		Nov-12-19 12:20		Nov-12-19 12:30		Nov-12-19 12:40		Nov-12-19 12:50		Nov-12-19 13:00	
BTEX by EPA 8021B	***Extracted:***	Nov-20-19 13:00		Nov-20-19 13:00		Nov-20-19 13:00		Nov-20-19 13:00		Nov-20-19 13:00		Nov-20-19 13:00	
	Analyzed:	Nov-21-19 04:23		Nov-21-19 05:59		Nov-21-19 06:23		Nov-21-19 06:47		Nov-21-19 07:11		Nov-21-19 07:35	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00859	0.0190	<0.00800	0.0177	<0.00799	0.0177	<0.00786	0.0174	<0.00853	0.0189	<0.00899	0.0199
Toluene		<0.00445	0.0190	<0.00414	0.0177	<0.00413	0.0177	<0.00407	0.0174	<0.00442	0.0189	<0.00465	0.0199
Ethylbenzene		<0.00586	0.0190	<0.00545	0.0177	<0.00544	0.0177	<0.00536	0.0174	<0.00581	0.0189	<0.00612	0.0199
m,p-Xylenes		<0.00648	0.0380	<0.00604	0.0354	<0.00602	0.0353	<0.00593	0.0348	<0.00643	0.0377	<0.00678	0.0398
o-Xylene		<0.00648	0.0190	<0.00604	0.0177	<0.00602	0.0177	<0.00593	0.0174	<0.00643	0.0189	<0.00678	0.0199
Total Xylenes		<0.00648	0.0190	<0.00604	0.0177	<0.00602	0.0177	<0.00593	0.0174	<0.00643	0.0189	<0.00678	0.0199
Total BTEX		<0.00445	0.0190	<0.00414	0.0177	<0.00413	0.0177	<0.00407	0.0174	<0.00442	0.0189	<0.00465	0.0199
Chloride by EPA 300 SUB: T104704215-19-30	***Extracted:***	Nov-18-19 11:02		Nov-18-19 11:02		Nov-18-19 11:02		Nov-18-19 11:02		Nov-18-19 11:02		Nov-18-19 11:02	
	Analyzed:	Nov-18-19 20:49		Nov-18-19 21:02		Nov-18-19 21:14		Nov-18-19 21:26		Nov-18-19 21:38		Nov-18-19 21:50	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		1810	10.2	534	10.1	3420	10.0	1780	9.94	2490	9.96	938	9.98
TPH DRO-ORO by SW-846 8015 SUB: T104704215-19-30	***Extracted:***	Nov-26-19 15:10		Nov-26-19 15:13		Nov-26-19 15:16		Nov-26-19 15:19		Nov-26-19 15:22		Nov-26-19 15:25	
	Analyzed:	Nov-26-19 20:42		Nov-26-19 21:04		Nov-26-19 21:26		Nov-26-19 21:48		Nov-26-19 22:10		Nov-27-19 13:39	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
TPH-DRO (C10-28)		174	6.66	2.84 J	6.67	<2.66	7.31	12.7	6.67	4.04 J	6.66	2.95 J	6.67
TPH-ORO (Oil Range Organics) - (C28-C35)		136	6.66	9.74	6.67	8.89	7.31	17.4	6.67	9.61	6.66	6.91	6.67
TPH GRO by EPA 8015 Mod. SUB: T104704215-19-30	***Extracted:***	Nov-19-19 15:30		Nov-19-19 15:30		Nov-19-19 15:30		Nov-19-19 15:30		Nov-19-19 15:30		Nov-19-19 15:30	
	Analyzed:	Nov-19-19 23:04		Nov-19-19 20:02		Nov-19-19 20:32		Nov-19-19 21:03		Nov-19-19 19:32		Nov-19-19 21:33	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
TPH-GRO		<2.48	9.92	<2.51	10.0	<2.49	9.96	<2.49	9.94	<2.49	9.94	<2.50	10.0

Jessica Kramer

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 643378

Terracon-Lubbock, Lubbock, TX

Project Name: Rock Daisy Road

Project Id: AR197570
Contact: Joseph Guesnier
Project Location: Client: Spur

Date Received in Lab: Fri Nov-15-19 03:55 pm
Report Date: 27-NOV-19
Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	643378-007		643378-008							
	Field Id:	CS-12.0 (2.5-3		CS-132.0 (2.5-3)							
	Depth:	2.5-3 ft		2.5-3 ft							
	Matrix:	SOIL		SOIL							
	Sampled:	Nov-12-19 13:10		Nov-12-19 13:20							
BTEX by EPA 8021B	*Extracted:*	Nov-20-19 13:00		Nov-20-19 13:00							
	Analyzed:	Nov-21-19 07:59		Nov-21-19 08:23							
	Units/RL:	mg/kg	RL	mg/kg	RL						
Benzene		<0.00793	0.0175	<0.00881	0.0195						
Toluene		<0.00411	0.0175	<0.00456	0.0195						
Ethylbenzene		<0.00540	0.0175	<0.00600	0.0195						
m,p-Xylenes		<0.00598	0.0351	<0.00665	0.0390						
o-Xylene		<0.00598	0.0175	<0.00665	0.0195						
Total Xylenes		<0.00598	0.0175	<0.00665	0.0195						
Total BTEX		<0.00411	0.0175	<0.00456	0.0195						
Chloride by EPA 300 SUB: T104704215-19-30	*Extracted:*	Nov-18-19 11:02		Nov-18-19 11:02							
	Analyzed:	Nov-18-19 22:03		Nov-18-19 22:15							
	Units/RL:	mg/kg	RL	mg/kg	RL						
Chloride		2330	9.98	391	9.96						
TPH DRO-ORO by SW-846 8015 SUB: T104704215-19-30	*Extracted:*	Nov-26-19 15:28		Nov-26-19 15:31							
	Analyzed:	Nov-27-19 14:01		Nov-27-19 14:44							
	Units/RL:	mg/kg	RL	mg/kg	RL						
TPH-DRO (C10-28)		4.50 J	6.66	3.61 J	6.66						
TPH-ORO (Oil Range Organics) - (C28-C35)		8.62	6.66	6.15 J	6.66						
TPH GRO by EPA 8015 Mod. SUB: T104704215-19-30	*Extracted:*	Nov-19-19 15:30		Nov-19-19 15:30							
	Analyzed:	Nov-19-19 22:04		Nov-19-19 22:34							
	Units/RL:	mg/kg	RL	mg/kg	RL						
TPH-GRO		<2.51	10.0	<2.48	9.90						

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

Jessica Kramer

Jessica Kramer
Project Assistant

Analytical Report 643378

for

Terracon-Lubbock

Project Manager: Joseph Guesnier

Rock Daisy Road

AR197570

27-NOV-19

Collected By: Client

6701 Aberdeen, Suite 9 Lubbock, TX 79424

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

XENCO LABORATORIES

27-NOV-19

Project Manager: **Joseph Guesnier**
Terracon-Lubbock
5827 50th st, Suite 1
Lubbock, TX 79424

Reference: XENCO Report No(s): **643378**
Rock Daisy Road
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) 643378. 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. 643378 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 Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

Sample Cross Reference 643378

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
CS-6.0 (0-0.5)	S	11-12-19 12:10	0 - 0.5 ft	643378-001
CS-7.0 (0-0.5)	S	11-12-19 12:20	0 - 0.5 ft	643378-002
CS-8.0 (0-0.5)	S	11-12-19 12:30	0 - 0.5 ft	643378-003
CS-9.0 (0-0.5)	S	11-12-19 12:40	0 - 0.5 ft	643378-004
CS-10.0 (0-0.5)	S	11-12-19 12:50	0 - 0.5 ft	643378-005
CS-11.0 (2.5-3)	S	11-12-19 13:00	2.5 - 3 ft	643378-006
CS-12.0 (2.5-3	S	11-12-19 13:10	2.5 - 3 ft	643378-007
CS-132.0 (2.5-3)	S	11-12-19 13:20	2.5 - 3 ft	643378-008

CASE NARRATIVE

Client Name: Terracon-Lubbock

Project Name: Rock Daisy Road

Project ID: *AR197570*
Work Order Number(s): *643378*

Report Date: *27-NOV-19*
Date Received: *11/15/2019*

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:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3108198 BTEX by EPA 8021B
Surrogate a,a,a-Trifluorotoluene recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 643378-001 SD,643378-007.
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 643378-007.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3108958 TPH DRO-ORO by SW-846 8015
Surrogate Pentacosane recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 643378-001.

Certificate of Analytical Results 643378

Terracon-Lubbock, Lubbock, TX
Rock Daisy Road

Sample Id:	**CS-6.0 (0-0.5)**	Matrix:	Soil	Date Received:	11.15.19 15.55
Lab Sample Id:	643378-001	Date Collected:	11.12.19 12.10	Sample Depth:	0 - 0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	11.18.19 11.02	Basis:	Wet Weight
Seq Number:	3107849			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1810**	10.2	0.360	mg/kg	11.18.19 20.49		1

Analytical Method:	TPH DRO-ORO by SW-846 8015			Prep Method:	SW3550
Tech:	JOZ			% Moisture:	
Analyst:	ISU	Date Prep:	11.26.19 15.10	Basis:	Wet Weight
Seq Number:	3108958			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-DRO (C10-28)	68334-30-5	**174**	6.66	2.42	mg/kg	11.26.19 20.42		1
TPH-ORO (Oil Range Organics) - (C28-C35)	ORO	**136**	6.66	3.37	mg/kg	11.26.19 20.42		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Pentacosane	629-99-2	134	%	40-130	11.26.19 20.42	**

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	11.20.19 13.00	Basis:	Wet Weight
Seq Number:	3108198				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00859	0.0190	0.00859	mg/kg	11.21.19 04.23	U	1
Toluene	108-88-3	<0.00445	0.0190	0.00445	mg/kg	11.21.19 04.23	U	1
Ethylbenzene	100-41-4	<0.00586	0.0190	0.00586	mg/kg	11.21.19 04.23	U	1
m,p-Xylenes	179601-23-1	<0.00648	0.0380	0.00648	mg/kg	11.21.19 04.23	U	1
o-Xylene	95-47-6	<0.00648	0.0190	0.00648	mg/kg	11.21.19 04.23	U	1
Total Xylenes	1330-20-7	<0.00648	0.0190	0.00648	mg/kg	11.21.19 04.23	U	1
Total BTEX		<0.00445	0.0190	0.00445	mg/kg	11.21.19 04.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	107	%	68-120	11.21.19 04.23	
a,a,a-Trifluorotoluene	98-08-8	114	%	71-121	11.21.19 04.23	

Certificate of Analytical Results 643378

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id:	**CS-6.0 (0-0.5)**	Matrix:	Soil	Date Received:	11.15.19 15.55
Lab Sample Id:	643378-001	Date Collected:	11.12.19 12.10	Sample Depth:	0 - 0.5 ft

Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	CRL			% Moisture:	
Analyst:	CRL	Date Prep:	11.19.19 15.30	Basis:	Wet Weight
Seq Number:	3108050			SUB: T104704215-19-30	

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<2.48	9.92	2.48	mg/kg	11.19.19 23.04	U	50

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	109	%	80-120	11.19.19 23.04	

Certificate of Analytical Results 643378

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id: **CS-7.0 (0-0.5)** Matrix: Soil Date Received: 11.15.19 15.55
Lab Sample Id: 643378-002 Date Collected: 11.12.19 12.20 Sample Depth: 0 - 0.5 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: JYM % Moisture:
Analyst: JYM Date Prep: 11.18.19 11.02 Basis: Wet Weight
Seq Number: 3107849 SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**534**	10.1	0.358	mg/kg	11.18.19 21.02		1

Analytical Method: TPH DRO-ORO by SW-846 8015 Prep Method: SW3550
Tech: JOZ % Moisture:
Analyst: ISU Date Prep: 11.26.19 15.13 Basis: Wet Weight
Seq Number: 3108958 SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-DRO (C10-28)	68334-30-5	**2.84**	6.67	2.43	mg/kg	11.26.19 21.04	J	1
TPH-ORO (Oil Range Organics) - (C28-C35)	ORO	**9.74**	6.67	3.37	mg/kg	11.26.19 21.04		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Pentacosane	629-99-2	107	%	40-130	11.26.19 21.04	

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
Tech: MIT % Moisture:
Analyst: MIT Date Prep: 11.20.19 13.00 Basis: Wet Weight
Seq Number: 3108198

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00800	0.0177	0.00800	mg/kg	11.21.19 05.59	U	1
Toluene	108-88-3	<0.00414	0.0177	0.00414	mg/kg	11.21.19 05.59	U	1
Ethylbenzene	100-41-4	<0.00545	0.0177	0.00545	mg/kg	11.21.19 05.59	U	1
m,p-Xylenes	179601-23-1	<0.00604	0.0354	0.00604	mg/kg	11.21.19 05.59	U	1
o-Xylene	95-47-6	<0.00604	0.0177	0.00604	mg/kg	11.21.19 05.59	U	1
Total Xylenes	1330-20-7	<0.00604	0.0177	0.00604	mg/kg	11.21.19 05.59	U	1
Total BTEX		<0.00414	0.0177	0.00414	mg/kg	11.21.19 05.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	68-120	11.21.19 05.59	
a,a,a-Trifluorotoluene	98-08-8	114	%	71-121	11.21.19 05.59	

Certificate of Analytical Results 643378

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id:	**CS-7.0 (0-0.5)**	Matrix:	Soil	Date Received:	11.15.19 15.55
Lab Sample Id:	643378-002	Date Collected:	11.12.19 12.20	Sample Depth:	0 - 0.5 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	CRL			% Moisture:	
Analyst:	CRL	Date Prep:	11.19.19 15.30	Basis:	Wet Weight
Seq Number:	3108050			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<2.51	10.0	2.51	mg/kg	11.19.19 20.02	U	50

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	110	%	80-120	11.19.19 20.02	

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Certificate of Analytical Results 643378

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id: **CS-8.0 (0-0.5)**
Lab Sample Id: 643378-003
Matrix: Soil
Date Collected: 11.12.19 12.30
Date Received: 11.15.19 15.55
Sample Depth: 0 - 0.5 ft

Analytical Method: Chloride by EPA 300
Tech: JYM
Analyst: JYM
Seq Number: 3107849
Date Prep: 11.18.19 11.02
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	**3420**	10.0	0.355	mg/kg	11.18.19 21.14		1

Analytical Method: TPH DRO-ORO by SW-846 8015
Tech: JOZ
Analyst: ISU
Seq Number: 3108958
Date Prep: 11.26.19 15.16
Prep Method: SW3550
% Moisture:
Basis: Wet Weight
SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-DRO (C10-28)	68334-30-5	<2.66	7.31	2.66	mg/kg	11.26.19 21.26	U	1
TPH-ORO (Oil Range Organics) - (C28-C35)	ORO	**8.89**	7.31	3.70	mg/kg	11.26.19 21.26		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Pentacosane	629-99-2	110	%	40-130	11.26.19 21.26	

Analytical Method: BTEX by EPA 8021B
Tech: MIT
Analyst: MIT
Seq Number: 3108198
Date Prep: 11.20.19 13.00
Prep Method: SW5030B
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00799	0.0177	0.00799	mg/kg	11.21.19 06.23	U	1
Toluene	108-88-3	<0.00413	0.0177	0.00413	mg/kg	11.21.19 06.23	U	1
Ethylbenzene	100-41-4	<0.00544	0.0177	0.00544	mg/kg	11.21.19 06.23	U	1
m,p-Xylenes	179601-23-1	<0.00602	0.0353	0.00602	mg/kg	11.21.19 06.23	U	1
o-Xylene	95-47-6	<0.00602	0.0177	0.00602	mg/kg	11.21.19 06.23	U	1
Total Xylenes	1330-20-7	<0.00602	0.0177	0.00602	mg/kg	11.21.19 06.23	U	1
Total BTEX		<0.00413	0.0177	0.00413	mg/kg	11.21.19 06.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	68-120	11.21.19 06.23	
a,a,a-Trifluorotoluene	98-08-8	117	%	71-121	11.21.19 06.23	

Certificate of Analytical Results 643378

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id:	**CS-8.0 (0-0.5)**	Matrix:	Soil	Date Received:	11.15.19 15.55
Lab Sample Id:	643378-003	Date Collected:	11.12.19 12.30	Sample Depth:	0 - 0.5 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	CRL			% Moisture:	
Analyst:	CRL	Date Prep:	11.19.19 15.30	Basis:	Wet Weight
Seq Number:	3108050			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<2.49	9.96	2.49	mg/kg	11.19.19 20.32	U	50

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	114	%	80-120	11.19.19 20.32	

Certificate of Analytical Results 643378

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id: **CS-9.0 (0-0.5)** Matrix: Soil Date Received: 11.15.19 15.55
Lab Sample Id: 643378-004 Date Collected: 11.12.19 12.40 Sample Depth: 0 - 0.5 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: JYM % Moisture:
Analyst: JYM Date Prep: 11.18.19 11.02 Basis: Wet Weight
Seq Number: 3107849 SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1780**	9.94	0.352	mg/kg	11.18.19 21.26		1

Analytical Method: TPH DRO-ORO by SW-846 8015 Prep Method: SW3550
Tech: JOZ % Moisture:
Analyst: ISU Date Prep: 11.26.19 15.19 Basis: Wet Weight
Seq Number: 3108958 SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-DRO (C10-28)	68334-30-5	**12.7**	6.67	2.43	mg/kg	11.26.19 21.48		1
TPH-ORO (Oil Range Organics) - (C28-C35)	ORO	**17.4**	6.67	3.37	mg/kg	11.26.19 21.48		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Pentacosane	629-99-2	101	%	40-130	11.26.19 21.48	

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
Tech: MIT % Moisture:
Analyst: MIT Date Prep: 11.20.19 13.00 Basis: Wet Weight
Seq Number: 3108198

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00786	0.0174	0.00786	mg/kg	11.21.19 06.47	U	1
Toluene	108-88-3	<0.00407	0.0174	0.00407	mg/kg	11.21.19 06.47	U	1
Ethylbenzene	100-41-4	<0.00536	0.0174	0.00536	mg/kg	11.21.19 06.47	U	1
m,p-Xylenes	179601-23-1	<0.00593	0.0348	0.00593	mg/kg	11.21.19 06.47	U	1
o-Xylene	95-47-6	<0.00593	0.0174	0.00593	mg/kg	11.21.19 06.47	U	1
Total Xylenes	1330-20-7	<0.00593	0.0174	0.00593	mg/kg	11.21.19 06.47	U	1
Total BTEX		<0.00407	0.0174	0.00407	mg/kg	11.21.19 06.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	68-120	11.21.19 06.47	
a,a,a-Trifluorotoluene	98-08-8	116	%	71-121	11.21.19 06.47	

Certificate of Analytical Results 643378

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id:	**CS-9.0 (0-0.5)**	Matrix:	Soil	Date Received:	11.15.19 15.55
Lab Sample Id:	643378-004	Date Collected:	11.12.19 12.40	Sample Depth:	0 - 0.5 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	CRL			% Moisture:	
Analyst:	CRL	Date Prep:	11.19.19 15.30	Basis:	Wet Weight
Seq Number:	3108050			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<2.49	9.94	2.49	mg/kg	11.19.19 21.03	U	50

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	111	%	80-120	11.19.19 21.03	

Certificate of Analytical Results 643378

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id: **CS-10.0 (0-0.5)**
Lab Sample Id: 643378-005
Matrix: Soil
Date Collected: 11.12.19 12.50
Date Received: 11.15.19 15.55
Sample Depth: 0 - 0.5 ft

Analytical Method: Chloride by EPA 300
Prep Method: E300P
Tech: JYM
% Moisture:
Analyst: JYM
Date Prep: 11.18.19 11.02
Basis: Wet Weight
Seq Number: 3107849
SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2490**	9.96	0.353	mg/kg	11.18.19 21.38		1

Analytical Method: TPH DRO-ORO by SW-846 8015
Prep Method: SW3550
Tech: JOZ
% Moisture:
Analyst: ISU
Date Prep: 11.26.19 15.22
Basis: Wet Weight
Seq Number: 3108958
SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-DRO (C10-28)	68334-30-5	**4.04**	6.66	2.42	mg/kg	11.26.19 22.10	J	1
TPH-ORO (Oil Range Organics) - (C28-C35)	ORO	**9.61**	6.66	3.37	mg/kg	11.26.19 22.10		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Pentacosane	629-99-2	95	%	40-130	11.26.19 22.10	

Analytical Method: BTEX by EPA 8021B
Prep Method: SW5030B
Tech: MIT
% Moisture:
Analyst: MIT
Date Prep: 11.20.19 13.00
Basis: Wet Weight
Seq Number: 3108198

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00853	0.0189	0.00853	mg/kg	11.21.19 07.11	U	1
Toluene	108-88-3	<0.00442	0.0189	0.00442	mg/kg	11.21.19 07.11	U	1
Ethylbenzene	100-41-4	<0.00581	0.0189	0.00581	mg/kg	11.21.19 07.11	U	1
m,p-Xylenes	179601-23-1	<0.00643	0.0377	0.00643	mg/kg	11.21.19 07.11	U	1
o-Xylene	95-47-6	<0.00643	0.0189	0.00643	mg/kg	11.21.19 07.11	U	1
Total Xylenes	1330-20-7	<0.00643	0.0189	0.00643	mg/kg	11.21.19 07.11	U	1
Total BTEX		<0.00442	0.0189	0.00442	mg/kg	11.21.19 07.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	68-120	11.21.19 07.11	
a,a,a-Trifluorotoluene	98-08-8	116	%	71-121	11.21.19 07.11	

Certificate of Analytical Results 643378

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id: **CS-10.0 (0-0.5)**
Lab Sample Id: 643378-005
Matrix: Soil
Date Collected: 11.12.19 12.50
Date Received: 11.15.19 15.55
Sample Depth: 0 - 0.5 ft

Analytical Method: TPH GRO by EPA 8015 Mod.
Prep Method: SW5030B
Tech: CRL
% Moisture:
Analyst: CRL
Date Prep: 11.19.19 15.30
Basis: Wet Weight
Seq Number: 3108050
SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<2.49	9.94	2.49	mg/kg	11.19.19 19.32	U	50

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	110	%	80-120	11.19.19 19.32	

Certificate of Analytical Results 643378

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id: **CS-11.0 (2.5-3)**
Matrix: Soil
Date Received: 11.15.19 15.55
Lab Sample Id: 643378-006
Date Collected: 11.12.19 13.00
Sample Depth: 2.5 - 3 ft

Analytical Method: Chloride by EPA 300
Prep Method: E300P
Tech: JYM
% Moisture:
Analyst: JYM
Date Prep: 11.18.19 11.02
Basis: Wet Weight
Seq Number: 3107849
SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**938**	9.98	0.353	mg/kg	11.18.19 21.50		1

Analytical Method: TPH DRO-ORO by SW-846 8015
Prep Method: SW3550
Tech: JOZ
% Moisture:
Analyst: ISU
Date Prep: 11.26.19 15.25
Basis: Wet Weight
Seq Number: 3108958
SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-DRO (C10-28)	68334-30-5	**2.95**	6.67	2.43	mg/kg	11.27.19 13.39	J	1
TPH-ORO (Oil Range Organics) - (C28-C35)	ORO	**6.91**	6.67	3.37	mg/kg	11.27.19 13.39		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Pentacosane	629-99-2	110	%	40-130	11.27.19 13.39	

Analytical Method: BTEX by EPA 8021B
Prep Method: SW5030B
Tech: MIT
% Moisture:
Analyst: MIT
Date Prep: 11.20.19 13.00
Basis: Wet Weight
Seq Number: 3108198

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00899	0.0199	0.00899	mg/kg	11.21.19 07.35	U	1
Toluene	108-88-3	<0.00465	0.0199	0.00465	mg/kg	11.21.19 07.35	U	1
Ethylbenzene	100-41-4	<0.00612	0.0199	0.00612	mg/kg	11.21.19 07.35	U	1
m,p-Xylenes	179601-23-1	<0.00678	0.0398	0.00678	mg/kg	11.21.19 07.35	U	1
o-Xylene	95-47-6	<0.00678	0.0199	0.00678	mg/kg	11.21.19 07.35	U	1
Total Xylenes	1330-20-7	<0.00678	0.0199	0.00678	mg/kg	11.21.19 07.35	U	1
Total BTEX		<0.00465	0.0199	0.00465	mg/kg	11.21.19 07.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	68-120	11.21.19 07.35	
a,a,a-Trifluorotoluene	98-08-8	119	%	71-121	11.21.19 07.35	

Certificate of Analytical Results 643378

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id:	**CS-11.0 (2.5-3)**	Matrix:	Soil	Date Received:	11.15.19 15.55
Lab Sample Id:	643378-006	Date Collected:	11.12.19 13.00	Sample Depth:	2.5 - 3 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	CRL			% Moisture:	
Analyst:	CRL	Date Prep:	11.19.19 15.30	Basis:	Wet Weight
Seq Number:	3108050			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<2.50	10.0	2.50	mg/kg	11.19.19 21.33	U	50

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	111	%	80-120	11.19.19 21.33	

Certificate of Analytical Results 643378

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id:	**CS-12.0 (2.5-3**	Matrix:	Soil	Date Received:	11.15.19 15.55
Lab Sample Id:	643378-007	Date Collected:	11.12.19 13.10	Sample Depth:	2.5 - 3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	11.18.19 11.02	Basis:	Wet Weight
Seq Number:	3107849			SUB: T104704215-19-30	

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2330**	9.98	0.353	mg/kg	11.18.19 22.03		1

Analytical Method:	TPH DRO-ORO by SW-846 8015			Prep Method:	SW3550
Tech:	JOZ			% Moisture:	
Analyst:	ISU	Date Prep:	11.26.19 15.28	Basis:	Wet Weight
Seq Number:	3108958			SUB: T104704215-19-30	

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-DRO (C10-28)	68334-30-5	**4.50**	6.66	2.42	mg/kg	11.27.19 14.01	J	1
TPH-ORO (Oil Range Organics) - (C28-C35)	ORO	**8.62**	6.66	3.37	mg/kg	11.27.19 14.01		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Pentacosane	629-99-2	113	%	40-130	11.27.19 14.01	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	11.20.19 13.00	Basis:	Wet Weight
Seq Number:	3108198				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00793	0.0175	0.00793	mg/kg	11.21.19 07.59	U	1
Toluene	108-88-3	<0.00411	0.0175	0.00411	mg/kg	11.21.19 07.59	U	1
Ethylbenzene	100-41-4	<0.00540	0.0175	0.00540	mg/kg	11.21.19 07.59	U	1
m,p-Xylenes	179601-23-1	<0.00598	0.0351	0.00598	mg/kg	11.21.19 07.59	U	1
o-Xylene	95-47-6	<0.00598	0.0175	0.00598	mg/kg	11.21.19 07.59	U	1
Total Xylenes	1330-20-7	<0.00598	0.0175	0.00598	mg/kg	11.21.19 07.59	U	1
Total BTEX		<0.00411	0.0175	0.00411	mg/kg	11.21.19 07.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	126	%	68-120	11.21.19 07.59	**
a,a,a-Trifluorotoluene	98-08-8	122	%	71-121	11.21.19 07.59	**

Certificate of Analytical Results 643378

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id:	**CS-12.0 (2.5-3**	Matrix:	Soil	Date Received:	11.15.19 15.55
Lab Sample Id:	643378-007	Date Collected:	11.12.19 13.10	Sample Depth:	2.5 - 3 ft

Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	CRL			% Moisture:	
Analyst:	CRL	Date Prep:	11.19.19 15.30	Basis:	Wet Weight
Seq Number:	3108050			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<2.51	10.0	2.51	mg/kg	11.19.19 22.04	U	50

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	109	%	80-120	11.19.19 22.04	

Certificate of Analytical Results 643378

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id:	**CS-132.0 (2.5-3)**	Matrix:	Soil	Date Received:	11.15.19 15.55
Lab Sample Id:	643378-008	Date Collected:	11.12.19 13.20	Sample Depth:	2.5 - 3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	11.18.19 11.02	Basis:	Wet Weight
Seq Number:	3107849			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**391**	9.96	0.353	mg/kg	11.18.19 22.15		1

Analytical Method:	TPH DRO-ORO by SW-846 8015			Prep Method:	SW3550
Tech:	JOZ			% Moisture:	
Analyst:	ISU	Date Prep:	11.26.19 15.31	Basis:	Wet Weight
Seq Number:	3108958			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-DRO (C10-28)	68334-30-5	**3.61**	6.66	2.43	mg/kg	11.27.19 14.44	J	1
TPH-ORO (Oil Range Organics) - (C28-C35)	ORO	**6.15**	6.66	3.37	mg/kg	11.27.19 14.44	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Pentacosane	629-99-2	65	%	40-130	11.27.19 14.44	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	11.20.19 13.00	Basis:	Wet Weight
Seq Number:	3108198				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00881	0.0195	0.00881	mg/kg	11.21.19 08.23	U	1
Toluene	108-88-3	<0.00456	0.0195	0.00456	mg/kg	11.21.19 08.23	U	1
Ethylbenzene	100-41-4	<0.00600	0.0195	0.00600	mg/kg	11.21.19 08.23	U	1
m,p-Xylenes	179601-23-1	<0.00665	0.0390	0.00665	mg/kg	11.21.19 08.23	U	1
o-Xylene	95-47-6	<0.00665	0.0195	0.00665	mg/kg	11.21.19 08.23	U	1
Total Xylenes	1330-20-7	<0.00665	0.0195	0.00665	mg/kg	11.21.19 08.23	U	1
Total BTEX		<0.00456	0.0195	0.00456	mg/kg	11.21.19 08.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	107	%	68-120	11.21.19 08.23	
a,a,a-Trifluorotoluene	98-08-8	116	%	71-121	11.21.19 08.23	

Certificate of Analytical Results 643378

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id:	**CS-132.0 (2.5-3)**	Matrix:	Soil	Date Received:	11.15.19 15.55
Lab Sample Id:	643378-008	Date Collected:	11.12.19 13.20	Sample Depth:	2.5 - 3 ft

Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	CRL			% Moisture:	
Analyst:	CRL	Date Prep:	11.19.19 15.30	Basis:	Wet Weight
Seq Number:	3108050			SUB: T104704215-19-30	

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<2.48	9.90	2.48	mg/kg	11.19.19 22.34	U	50

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	117	%	80-120	11.19.19 22.34	

XENCO LABORATORIES

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.

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

XENCO LABORATORIES

QC Summary 643378

Terracon-Lubbock

Rock Daisy Road

Analytical Method: Chloride by EPA 300 | Prep Method: E300P

Seq Number: 3107849 | Matrix: Solid | Date Prep: 11.18.19

MB Sample Id: 7690521-1-BLK | LCS Sample Id: 7690521-1-BKS | LCSD Sample Id: 7690521-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	3.98	100	107	107	107	107	80-120	0	20	mg/kg	11.18.19 18:11	

Analytical Method: Chloride by EPA 300 | Prep Method: E300P

Seq Number: 3107849 | Matrix: Soil | Date Prep: 11.18.19

Parent Sample Id: 643407-001 | MS Sample Id: 643407-001 S | MSD Sample Id: 643407-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1080	99.6	1150	70	1160	80	80-120	1	20	mg/kg	11.18.19 19:24	X

Analytical Method: Chloride by EPA 300 | Prep Method: E300P

Seq Number: 3107849 | Matrix: Soil | Date Prep: 11.18.19

Parent Sample Id: 643480-001 | MS Sample Id: 643480-001 S | MSD Sample Id: 643480-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	5.67	100	101	95	101	96	80-120	0	20	mg/kg	11.18.19 18:47	

Analytical Method: TPH DRO-ORO by SW-846 8015 | Prep Method: SW3550

Seq Number: 3108958 | Matrix: Solid | Date Prep: 11.26.19

MB Sample Id: 7691223-1-BLK | LCS Sample Id: 7691223-1-BKS | LCSD Sample Id: 7691223-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-DRO (C10-28)	<2.43	33.3	32.7	98	30.8	92	54-124	6	35	mg/kg	11.26.19 14:41	
TPH-ORO (Oil Range Organics) - (C28-	<3.37	33.3	30.9	93	27.6	83	63-142	11	35	mg/kg	11.26.19 14:41	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
Pentacosane	101		104		103		40-130	%	11.26.19 14:41

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 643378

Terracon-Lubbock

Rock Daisy Road

Analytical Method: TPH DRO-ORO by SW-846 8015 Prep Method: SW3550

Seq Number: 3108958 Matrix: Soil Date Prep: 11.26.19

Parent Sample Id: 644066-001 MS Sample Id: 644066-001 S MSD Sample Id: 644066-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-DRO (C10-28)	<2.43	33.3	33.1	99	33.5	101	54-124	1	35	mg/kg	11.26.19 16:12	
TPH-ORO (Oil Range Organics) - (C28-	4.60	33.3	31.2	80	32.8	85	63-142	5	35	mg/kg	11.26.19 16:12	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
Pentacosane	99		98		40-130	%	11.26.19 16:12

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Seq Number: 3108198 Matrix: Solid Date Prep: 11.20.19

MB Sample Id: 7690777-1-BLK LCS Sample Id: 7690777-1-BKS LCSD Sample Id: 7690777-1-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	1.94	97	1.89	95	55-120	3	20	mg/kg	11.21.19 02:22	
Toluene	<0.00468	2.00	1.87	94	1.84	92	77-120	2	20	mg/kg	11.21.19 02:22	
Ethylbenzene	<0.00616	2.00	1.89	95	1.88	94	77-120	1	20	mg/kg	11.21.19 02:22	
m,p-Xylenes	<0.00682	4.00	3.79	95	3.75	94	78-120	1	20	mg/kg	11.21.19 02:22	
o-Xylene	<0.00682	2.00	1.95	98	1.91	96	78-120	2	20	mg/kg	11.21.19 02:22	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	81		106		79		68-120	%	11.21.19 02:22
a,a,a-Trifluorotoluene	85		112		82		71-121	%	11.21.19 02:22

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Seq Number: 3108198 Matrix: Soil Date Prep: 11.20.19

Parent Sample Id: 643378-001 MS Sample Id: 643378-001 S MSD Sample Id: 643378-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00904	2.00	1.88	94	1.93	97	54-120	3	25	mg/kg	11.21.19 04:47	
Toluene	<0.00468	2.00	1.99	100	2.04	103	57-120	2	25	mg/kg	11.21.19 04:47	
Ethylbenzene	<0.00616	2.00	2.00	100	2.04	103	58-131	2	25	mg/kg	11.21.19 04:47	
m,p-Xylenes	<0.00682	4.00	3.99	100	4.07	102	62-124	2	25	mg/kg	11.21.19 04:47	
o-Xylene	<0.00682	2.00	1.97	99	2.02	102	62-124	3	25	mg/kg	11.21.19 04:47	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	90		112		68-120	%	11.21.19 04:47
a,a,a-Trifluorotoluene	96		124	**	71-121	%	11.21.19 04:47

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

Terracon-Lubbock

Rock Daisy Road

Analytical Method: TPH GRO by EPA 8015 Mod.
Prep Method: SW5030B

Seq Number: 3108050 | Matrix: Solid | Date Prep: 11.19.19

MB Sample Id: 7690721-1-BLK | LCS Sample Id: 7690721-1-BKS | LCSD Sample Id: 7690721-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-GRO	<0.0500	1.00	0.863	86	1.08	108	75-135	22	35	mg/kg	11.19.19 16:30	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	109		107		106		80-120	%	11.19.19 16:30

Analytical Method: TPH GRO by EPA 8015 Mod.
Prep Method: SW5030B

Seq Number: 3108050 | Matrix: Soil | Date Prep: 11.19.19

Parent Sample Id: 643378-005 | MS Sample Id: 643378-005 S | MSD Sample Id: 643378-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-GRO	<2.49	49.7	49.6	100	53.3	107	75-135	7	35	mg/kg	11.19.19 17:30	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	105		108		80-120	%	11.19.19 17:30

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	

643378

Terracon

CHAIN OF CUSTODY RECORD

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

Office Location: Lubbock
Project Manager: Joseph Guesnier
Sampler's Name: Bryant McBrayer

LAB USE ONLY
DUE DATE:
TEMP OF COOLER WHEN RECEIVED (°C) 4.9/4.9 JG
Page 1 of 1

Project Number: AR197270
Project Name: Rock Daisy Road

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	2 oz Glass	4 oz Glass	5035 kit	40 ml VOA	Chloride (EPA Method 300)	TPH Extended 8015	BTEX (EPA Method 8021B)	Hold				Lab Sample ID
S	11/12/2019	12:10		X	CS-6.0 (0-0.5)	0'	0.5'		X			X	X	X					1
S	11/12/2019	12:20		X	CS-7.0 (0-0.5)	0'	0.5'		X			X	X	X					2
S	11/12/2019	12:30		X	CS-8.0 (0-0.5)	0'	0.5'		X			X	X	X					3
S	11/12/2019	12:40		X	CS-9.0 (0-0.5)	0'	0.5'		X			X	X	X					4
S	11/12/2019	12:50		X	CS-10.0 (0-0.5)	0'	0.5'		X			X	X	X					5
S	11/12/2019	13:00		X	CS-11.0 (2.5-3)	2.5'	3'		X			X	X	X					6
S	11/12/2019	13:10		X	CS-12.0 (2.5-3)	2.5'	3'		X			X	X	X					7
S	11/12/2019	13:20		X	CS-13.0 (2.5-3)	2.5'	3'		X			X	X	X					8

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:
[signature]	11/14/19	15:55	Brenda Ward		
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

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 ______

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

Inter-Office Shipment

IOS Number : 52366

Date/Time: 11.15.2019 | 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.: 777003112039 | E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
643378-001	S	CS-6.0 (0-0.5)	11.12.2019 12:10	E300_CL	Chloride by EPA 300	11.21.2019	05.10.2020	JKR	CL	
643378-001	S	CS-6.0 (0-0.5)	11.12.2019 12:10	SW8015GRO	TPH GRO by EPA 8015 Mod.	11.21.2019	11.26.2019	JKR	PHCG	
643378-001	S	CS-6.0 (0-0.5)	11.12.2019 12:10	SW8015DRO-ORO	TPH DRO-ORO by SW-846 8015	11.21.2019	11.26.2019	JKR	PHCD	
643378-002	S	CS-7.0 (0-0.5)	11.12.2019 12:20	E300_CL	Chloride by EPA 300	11.21.2019	05.10.2020	JKR	CL	
643378-002	S	CS-7.0 (0-0.5)	11.12.2019 12:20	SW8015DRO-ORO	TPH DRO-ORO by SW-846 8015	11.21.2019	11.26.2019	JKR	PHCD	
643378-002	S	CS-7.0 (0-0.5)	11.12.2019 12:20	SW8015GRO	TPH GRO by EPA 8015 Mod.	11.21.2019	11.26.2019	JKR	PHCG	
643378-003	S	CS-8.0 (0-0.5)	11.12.2019 12:30	SW8015DRO-ORO	TPH DRO-ORO by SW-846 8015	11.21.2019	11.26.2019	JKR	PHCD	
643378-003	S	CS-8.0 (0-0.5)	11.12.2019 12:30	E300_CL	Chloride by EPA 300	11.21.2019	05.10.2020	JKR	CL	
643378-003	S	CS-8.0 (0-0.5)	11.12.2019 12:30	SW8015GRO	TPH GRO by EPA 8015 Mod.	11.21.2019	11.26.2019	JKR	PHCG	
643378-004	S	CS-9.0 (0-0.5)	11.12.2019 12:40	SW8015DRO-ORO	TPH DRO-ORO by SW-846 8015	11.21.2019	11.26.2019	JKR	PHCD	
643378-004	S	CS-9.0 (0-0.5)	11.12.2019 12:40	E300_CL	Chloride by EPA 300	11.21.2019	05.10.2020	JKR	CL	
643378-004	S	CS-9.0 (0-0.5)	11.12.2019 12:40	SW8015GRO	TPH GRO by EPA 8015 Mod.	11.21.2019	11.26.2019	JKR	PHCG	
643378-005	S	CS-10.0 (0-0.5)	11.12.2019 12:50	SW8015DRO-ORO	TPH DRO-ORO by SW-846 8015	11.21.2019	11.26.2019	JKR	PHCD	
643378-005	S	CS-10.0 (0-0.5)	11.12.2019 12:50	E300_CL	Chloride by EPA 300	11.21.2019	05.10.2020	JKR	CL	
643378-005	S	CS-10.0 (0-0.5)	11.12.2019 12:50	SW8015GRO	TPH GRO by EPA 8015 Mod.	11.21.2019	11.26.2019	JKR	PHCG	
643378-006	S	CS-11.0 (2.5-3)	11.12.2019 13:00	E300_CL	Chloride by EPA 300	11.21.2019	05.10.2020	JKR	CL	
643378-006	S	CS-11.0 (2.5-3)	11.12.2019 13:00	SW8015DRO-ORO	TPH DRO-ORO by SW-846 8015	11.21.2019	11.26.2019	JKR	PHCD	
643378-006	S	CS-11.0 (2.5-3)	11.12.2019 13:00	SW8015GRO	TPH GRO by EPA 8015 Mod.	11.21.2019	11.26.2019	JKR	PHCG	
643378-007	S	CS-12.0 (2.5-3	11.12.2019 13:10	SW8015GRO	TPH GRO by EPA 8015 Mod.	11.21.2019	11.26.2019	JKR	PHCG	
643378-007	S	CS-12.0 (2.5-3	11.12.2019 13:10	SW8015DRO-ORO	TPH DRO-ORO by SW-846 8015	11.21.2019	11.26.2019	JKR	PHCD	
643378-007	S	CS-12.0 (2.5-3	11.12.2019 13:10	E300_CL	Chloride by EPA 300	11.21.2019	05.10.2020	JKR	CL	
643378-008	S	CS-132.0 (2.5-3)	11.12.2019 13:20	SW8015DRO-ORO	TPH DRO-ORO by SW-846 8015	11.21.2019	11.26.2019	JKR	PHCD	
643378-008	S	CS-132.0 (2.5-3)	11.12.2019 13:20	SW8015GRO	TPH GRO by EPA 8015 Mod.	11.21.2019	11.26.2019	JKR	PHCG	
643378-008	S	CS-132.0 (2.5-3)	11.12.2019 13:20	E300_CL	Chloride by EPA 300	11.21.2019	05.10.2020	JKR	CL	

Inter-Office Shipment

IOS Number : 52366

Date/Time:	11.15.2019	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.:	777003112039	E-Mail:	jessica.kramer@xenco.com

Inter Office Shipment or Sample Comments:

Relinquished By: Brenda Ward

Brenda Ward

Date Relinquished: 11.15.2019

Received By: Ashly Kowalski

Date Received: 11.16.2019

Cooler Temperature: 5.4

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Houston
IOS #: 52366

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used : HOU-068

Sent By: Brenda Ward **Date Sent:** 11.15.2019 02.15 PM
Received By: Ashly Kowalski **Date Received:** 11.16.2019 10.00 AM

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	5.4	
#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: Ashly Kowalski Date: 11.16.2019

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Terracon-Lubbock

Date/ Time Received: 11/15/2019 03:55:00 PM

Work Order #: 643378

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)?	4.9	
#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**	Chloride, SW8015 TPH 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
Brenda Ward
Date: 11/15/2019

Checklist reviewed by: Jessica Kramer
Jessica Kramer
Date: 11/18/2019

Certificate of Analysis Summary 643407

Terracon-Lubbock, Lubbock, TX

Project Name: Rock Daisy Road

Project Id: AR197270
Contact: Joseph Guesnier
Project Location: Client Spur

Date Received in Lab: Thu Nov-14-19 03:55 pm
Report Date: 20-NOV-19
Project Manager: Jessica Kramer

Analysis Requested												
	Lab Id:	643407-001		643407-002		643407-003		643407-004				
	Field Id:	CS-1.1 (2.2-5)		CS-2.1 (2.2-5)		CS-3.1 (2.2-5)		CS-4.1 (0-0.5)				
	Depth:	2-2.5 ft		2-2.5 ft		2-2.5 ft		0-0.5 ft				
	Matrix:	SOIL		SOIL		SOIL		SOIL				
	Sampled:	Nov-12-19 11:45		Nov-12-19 12:02		Nov-12-19 12:14		Nov-12-19 12:32				
BTEX by EPA 8021B	***Extracted:***	Nov-18-19 15:00		Nov-18-19 15:00		Nov-18-19 15:00		Nov-18-19 15:00				
	Analyzed:	Nov-19-19 23:37		Nov-20-19 02:02		Nov-20-19 02:26		Nov-20-19 02:50				
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL			
Benzene		<0.00878	0.0194	<0.00854	0.0189	<0.00893	0.0198	<0.00853	0.0189			
Toluene		<0.00454	0.0194	0.00945 J	0.0189	<0.00462	0.0198	<0.00442	0.0189			
Ethylbenzene		<0.00598	0.0194	<0.00582	0.0189	<0.00609	0.0198	<0.00581	0.0189			
m,p-Xylenes		<0.00662	0.0388	<0.00645	0.0378	<0.00674	0.0395	<0.00643	0.0377			
o-Xylene		<0.00662	0.0194	<0.00645	0.0189	<0.00674	0.0198	<0.00643	0.0189			
Total Xylenes		<0.00662	0.0194	<0.00645	0.0189	<0.00674	0.0198	<0.00643	0.0189			
Total BTEX		<0.00454	0.0194	0.00945 J	0.0189	<0.00462	0.0198	<0.00442	0.0189			
Chloride by EPA 300 SUB: T104704215-19-30	***Extracted:***	Nov-18-19 11:02		Nov-18-19 11:02		Nov-18-19 11:02		Nov-18-19 11:02				
	Analyzed:	Nov-18-19 19:12		Nov-18-19 19:48		Nov-18-19 20:25		Nov-18-19 20:37				
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL			
Chloride		1080 X	9.98	2970	9.94	317	10.0	66.8	9.96			
DRO-ORO By SW8015B	***Extracted:***	Nov-18-19 11:30		Nov-18-19 11:30		Nov-18-19 11:30		Nov-18-19 11:30				
	Analyzed:	Nov-19-19 17:57		Nov-19-19 20:16		Nov-19-19 20:50		Nov-19-19 21:24				
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL			
Diesel Range Organics (DRO)		<7.45	24.9	<7.55	25.2	<7.52	25.1	68.5	24.9			
Oil Range Hydrocarbons (ORO)		<7.45	24.9	<7.55	25.2	<7.52	25.1	<7.44	24.9			
TPH GRO by EPA 8015 Mod.	***Extracted:***	Nov-18-19 15:00		Nov-18-19 15:00		Nov-18-19 15:00		Nov-18-19 15:00				
	Analyzed:	Nov-19-19 23:37		Nov-20-19 02:02		Nov-20-19 02:26		Nov-20-19 02:50				
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL			
TPH-GRO		<0.263	3.88	<0.256	3.78	<0.268	3.95	<0.256	3.77			

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

Jessica Kramer

Jessica Kramer
Project Assistant

Analytical Report 643407

for

Terracon-Lubbock

Project Manager: Joseph Guesnier

Rock Daisy Road

AR197270

20-NOV-19

Collected By: Client

6701 Aberdeen, Suite 9 Lubbock, TX 79424

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

20-NOV-19

Project Manager: **Joseph Guesnier**
Terracon-Lubbock
5827 50th st, Suite 1
Lubbock, TX 79424

Reference: XENCO Report No(s): **643407**
Rock Daisy Road
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) 643407. 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. 643407 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 Assistant

Sample Cross Reference 643407

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
CS-1.1 (2.2-5)	S	11-12-19 11:45	2 - 2.5 ft	643407-001
CS-2.1 (2.2-5)	S	11-12-19 12:02	2 - 2.5 ft	643407-002
CS-3.1 (2.2-5)	S	11-12-19 12:14	2 - 2.5 ft	643407-003
CS-4.1 (0-0.5)	S	11-12-19 12:32	0 - 0.5 ft	643407-004

CASE NARRATIVE

Client Name: Terracon-Lubbock
Project Name: Rock Daisy Road

Project ID:	*AR197270*	Report Date:	*20-NOV-19*
Work Order Number(s):	*643407*	Date Received:	*11/14/2019*

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:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3107849 Inorganic Anions by EPA 300
Lab Sample ID 643480-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD).
Chloride recovered below QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference.
Samples in the analytical batch are: 643407-001, -002, -003, -004.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3108040 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3108041 TPH GRO by EPA 8015 Mod.
Surrogate 4-Bromofluorobenzene recovered above QC limits Data confirmed by re-analysis. Samples affected are: 7690725-1-BKS,643407-001 S,643407-001 SD.

Batch: LBA-3108060 DRO-ORO By SW8015B
Lab Sample ID 643407-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD).
Diesel Range Organics (DRO) Relative Percent Difference (RPD) between matrix spike and duplicate was above quality control limits.
Samples in the analytical batch are: 643407-001, -002, -003, -004

Outlier/s are due to possible matrix interference.

Blank Spike recoveries and RPDs within Quality Control limits; therefore the data was accepted.

Certificate of Analytical Results 643407

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id: **CS-1.1 (2.2-5)**
Lab Sample Id: 643407-001
Matrix: Soil
Date Collected: 11.12.19 11.45
Date Received: 11.14.19 15.55
Sample Depth: 2 - 2.5 ft

Analytical Method: Chloride by EPA 300
Tech: JYM
Analyst: JYM
Seq Number: 3107849
Date Prep: 11.18.19 11.02
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	**1080**	9.98	0.353	mg/kg	11.18.19 19.12	X	1

Analytical Method: DRO-ORO By SW8015B
Tech: MIT
Analyst: MIT
Seq Number: 3108060
Date Prep: 11.18.19 11.30
Prep Method: SW8015P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.45	24.9	7.45	mg/kg	11.19.19 17.57	UF	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.45	24.9	7.45	mg/kg	11.19.19 17.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	87	%	65-144	11.19.19 17.57	
n-Triacontane	638-68-6	97	%	46-152	11.19.19 17.57	

Analytical Method: BTEX by EPA 8021B
Tech: MIT
Analyst: MIT
Seq Number: 3108040
Date Prep: 11.18.19 15.00
Prep Method: SW5030B
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00878	0.0194	0.00878	mg/kg	11.19.19 23.37	U	1
Toluene	108-88-3	<0.00454	0.0194	0.00454	mg/kg	11.19.19 23.37	U	1
Ethylbenzene	100-41-4	<0.00598	0.0194	0.00598	mg/kg	11.19.19 23.37	U	1
m,p-Xylenes	179601-23-1	<0.00662	0.0388	0.00662	mg/kg	11.19.19 23.37	U	1
o-Xylene	95-47-6	<0.00662	0.0194	0.00662	mg/kg	11.19.19 23.37	U	1
Total Xylenes	1330-20-7	<0.00662	0.0194	0.00662	mg/kg	11.19.19 23.37	U	1
Total BTEX		<0.00454	0.0194	0.00454	mg/kg	11.19.19 23.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	89	%	68-120	11.19.19 23.37	
a,a,a-Trifluorotoluene	98-08-8	99	%	71-121	11.19.19 23.37	

Certificate of Analytical Results 643407

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id:	**CS-1.1 (2.2-5)**	Matrix:	Soil	Date Received:	11.14.19 15.55
Lab Sample Id:	643407-001	Date Collected:	11.12.19 11.45	Sample Depth:	2 - 2.5 ft

Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	11.18.19 15.00	Basis:	Wet Weight
Seq Number:	3108041				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.263	3.88	0.263	mg/kg	11.19.19 23.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	79	%	76-123	11.19.19 23.37	
a,a,a-Trifluorotoluene	98-08-8	81	%	69-120	11.19.19 23.37	

XENCO LABORATORIES

Certificate of Analytical Results 643407

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id:	**CS-2.1 (2.2-5)**	Matrix:	Soil	Date Received:	11.14.19 15.55
Lab Sample Id:	643407-002	Date Collected:	11.12.19 12.02	Sample Depth:	2 - 2.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	11.18.19 11.02	Basis:	Wet Weight
Seq Number:	3107849			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2970**	9.94	0.352	mg/kg	11.18.19 19.48		1

Analytical Method:	DRO-ORO By SW8015B			Prep Method:	SW8015P
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	11.18.19 11.30	Basis:	Wet Weight
Seq Number:	3108060				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.55	25.2	7.55	mg/kg	11.19.19 20.16	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.55	25.2	7.55	mg/kg	11.19.19 20.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	80	%	65-144	11.19.19 20.16	
n-Triacontane	638-68-6	91	%	46-152	11.19.19 20.16	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	11.18.19 15.00	Basis:	Wet Weight
Seq Number:	3108040				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00854	0.0189	0.00854	mg/kg	11.20.19 02.02	U	1
Toluene	108-88-3	**0.00945**	0.0189	0.00442	mg/kg	11.20.19 02.02	J	1
Ethylbenzene	100-41-4	<0.00582	0.0189	0.00582	mg/kg	11.20.19 02.02	U	1
m,p-Xylenes	179601-23-1	<0.00645	0.0378	0.00645	mg/kg	11.20.19 02.02	U	1
o-Xylene	95-47-6	<0.00645	0.0189	0.00645	mg/kg	11.20.19 02.02	U	1
Total Xylenes	1330-20-7	<0.00645	0.0189	0.00645	mg/kg	11.20.19 02.02	U	1
Total BTEX		**0.00945**	0.0189	0.00442	mg/kg	11.20.19 02.02	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	107	%	68-120	11.20.19 02.02	
a,a,a-Trifluorotoluene	98-08-8	114	%	71-121	11.20.19 02.02	

Certificate of Analytical Results 643407

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id: **CS-2.1 (2.2-5)**
Matrix: Soil
Date Received: 11.14.19 15.55
Lab Sample Id: 643407-002
Date Collected: 11.12.19 12.02
Sample Depth: 2 - 2.5 ft

Analytical Method: TPH GRO by EPA 8015 Mod.
Prep Method: SW5030B
Tech: MIT
% Moisture:
Analyst: MIT
Date Prep: 11.18.19 15.00
Basis: Wet Weight
Seq Number: 3108041

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.256	3.78	0.256	mg/kg	11.20.19 02.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	96	%	76-123	11.20.19 02.02	
a,a,a-Trifluorotoluene	98-08-8	93	%	69-120	11.20.19 02.02	

XENCO LABORATORIES

Certificate of Analytical Results 643407

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id: **CS-3.1 (2.2-5)** Matrix: Soil Date Received: 11.14.19 15.55
Lab Sample Id: 643407-003 Date Collected: 11.12.19 12.14 Sample Depth: 2 - 2.5 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: JYM % Moisture:
Analyst: JYM Date Prep: 11.18.19 11.02 Basis: Wet Weight
Seq Number: 3107849 SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**317**	10.0	0.355	mg/kg	11.18.19 20.25		1

Analytical Method: DRO-ORO By SW8015B Prep Method: SW8015P
Tech: MIT % Moisture:
Analyst: MIT Date Prep: 11.18.19 11.30 Basis: Wet Weight
Seq Number: 3108060

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.52	25.1	7.52	mg/kg	11.19.19 20.50	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.52	25.1	7.52	mg/kg	11.19.19 20.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	81	%	65-144	11.19.19 20.50	
n-Triacontane	638-68-6	92	%	46-152	11.19.19 20.50	

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
Tech: MIT % Moisture:
Analyst: MIT Date Prep: 11.18.19 15.00 Basis: Wet Weight
Seq Number: 3108040

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00893	0.0198	0.00893	mg/kg	11.20.19 02.26	U	1
Toluene	108-88-3	<0.00462	0.0198	0.00462	mg/kg	11.20.19 02.26	U	1
Ethylbenzene	100-41-4	<0.00609	0.0198	0.00609	mg/kg	11.20.19 02.26	U	1
m,p-Xylenes	179601-23-1	<0.00674	0.0395	0.00674	mg/kg	11.20.19 02.26	U	1
o-Xylene	95-47-6	<0.00674	0.0198	0.00674	mg/kg	11.20.19 02.26	U	1
Total Xylenes	1330-20-7	<0.00674	0.0198	0.00674	mg/kg	11.20.19 02.26	U	1
Total BTEX		<0.00462	0.0198	0.00462	mg/kg	11.20.19 02.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	97	%	68-120	11.20.19 02.26	
a,a,a-Trifluorotoluene	98-08-8	103	%	71-121	11.20.19 02.26	

Certificate of Analytical Results 643407

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id:	**CS-3.1 (2.2-5)**	Matrix:	Soil	Date Received:	11.14.19 15.55
Lab Sample Id:	643407-003	Date Collected:	11.12.19 12.14	Sample Depth:	2 - 2.5 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	11.18.19 15.00	Basis:	Wet Weight
Seq Number:	3108041				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.268	3.95	0.268	mg/kg	11.20.19 02.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	87	%	76-123	11.20.19 02.26	
a,a,a-Trifluorotoluene	98-08-8	85	%	69-120	11.20.19 02.26	

Certificate of Analytical Results 643407

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id: **CS-4.1 (0-0.5)** Matrix: Soil Date Received: 11.14.19 15.55
Lab Sample Id: 643407-004 Date Collected: 11.12.19 12.32 Sample Depth: 0 - 0.5 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: JYM % Moisture:
Analyst: JYM Date Prep: 11.18.19 11.02 Basis: Wet Weight
Seq Number: 3107849 SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**66.8**	9.96	0.353	mg/kg	11.18.19 20.37		1

Analytical Method: DRO-ORO By SW8015B Prep Method: SW8015P
Tech: MIT % Moisture:
Analyst: MIT Date Prep: 11.18.19 11.30 Basis: Wet Weight
Seq Number: 3108060

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	**68.5**	24.9	7.44	mg/kg	11.19.19 21.24		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.44	24.9	7.44	mg/kg	11.19.19 21.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	113	%	65-144	11.19.19 21.24	
n-Triacontane	638-68-6	126	%	46-152	11.19.19 21.24	

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
Tech: MIT % Moisture:
Analyst: MIT Date Prep: 11.18.19 15.00 Basis: Wet Weight
Seq Number: 3108040

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00853	0.0189	0.00853	mg/kg	11.20.19 02.50	U	1
Toluene	108-88-3	<0.00442	0.0189	0.00442	mg/kg	11.20.19 02.50	U	1
Ethylbenzene	100-41-4	<0.00581	0.0189	0.00581	mg/kg	11.20.19 02.50	U	1
m,p-Xylenes	179601-23-1	<0.00643	0.0377	0.00643	mg/kg	11.20.19 02.50	U	1
o-Xylene	95-47-6	<0.00643	0.0189	0.00643	mg/kg	11.20.19 02.50	U	1
Total Xylenes	1330-20-7	<0.00643	0.0189	0.00643	mg/kg	11.20.19 02.50	U	1
Total BTEX		<0.00442	0.0189	0.00442	mg/kg	11.20.19 02.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	88	%	68-120	11.20.19 02.50	
a,a,a-Trifluorotoluene	98-08-8	97	%	71-121	11.20.19 02.50	

Certificate of Analytical Results 643407

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id:	**CS-4.1 (0-0.5)**	Matrix:	Soil	Date Received:	11.14.19 15.55
Lab Sample Id:	643407-004	Date Collected:	11.12.19 12.32	Sample Depth:	0 - 0.5 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	11.18.19 15.00	Basis:	Wet Weight
Seq Number:	3108041				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.256	3.77	0.256	mg/kg	11.20.19 02.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	79	%	76-123	11.20.19 02.50	
a,a,a-Trifluorotoluene	98-08-8	80	%	69-120	11.20.19 02.50	

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.

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 643407

Terracon-Lubbock

Rock Daisy Road

Analytical Method: Chloride by EPA 300 | Prep Method: E300P
Seq Number: 3107849 | Matrix: Solid | Date Prep: 11.18.19
MB Sample Id: 7690521-1-BLK | LCS Sample Id: 7690521-1-BKS | LCSD Sample Id: 7690521-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	3.98	100	107	107	107	107	80-120	0	20	mg/kg	11.18.19 18:11	

Analytical Method: Chloride by EPA 300 | Prep Method: E300P
Seq Number: 3107849 | Matrix: Soil | Date Prep: 11.18.19
Parent Sample Id: 643407-001 | MS Sample Id: 643407-001 S | MSD Sample Id: 643407-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1080	99.6	1150	70	1160	80	80-120	1	20	mg/kg	11.18.19 19:24	X

Analytical Method: Chloride by EPA 300 | Prep Method: E300P
Seq Number: 3107849 | Matrix: Soil | Date Prep: 11.18.19
Parent Sample Id: 643480-001 | MS Sample Id: 643480-001 S | MSD Sample Id: 643480-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	5.67	100	101	95	101	96	80-120	0	20	mg/kg	11.18.19 18:47	

Analytical Method: DRO-ORO By SW8015B | Prep Method: SW8015P
Seq Number: 3108060 | Matrix: Solid | Date Prep: 11.18.19
MB Sample Id: 7690745-1-BLK | LCS Sample Id: 7690745-1-BKS | LCSD Sample Id: 7690745-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Diesel Range Organics (DRO)	<7.48	100	84.4	84	103	103	63-139	20	20	mg/kg	11.19.19 15:03	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
Tricosane	89		91		92		65-144	%	11.19.19 15:03
n-Triacontane	98		97		97		46-152	%	11.19.19 15:03

Analytical Method: DRO-ORO By SW8015B | Prep Method: SW8015P
Seq Number: 3108060 | Matrix: Solid | Date Prep: 11.18.19
MB Sample Id: 7690745-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Oil Range Hydrocarbons (ORO)	<7.48	mg/kg	11.19.19 17:22	

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 643407

Terracon-Lubbock

Rock Daisy Road

Analytical Method: DRO-ORO By SW8015B Prep Method: SW8015P
Seq Number: 3108060 Matrix: Soil Date Prep: 11.18.19
Parent Sample Id: 643407-001 MS Sample Id: 643407-001 S MSD Sample Id: 643407-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Diesel Range Organics (DRO)	<7.47	99.9	110	110	81.2	82	63-139	30	20	mg/kg	11.19.19 18:32	F

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
Tricosane	98		86		65-144	%	11.19.19 18:32
n-Triacontane	99		93		46-152	%	11.19.19 18:32

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
Seq Number: 3108040 Matrix: Solid Date Prep: 11.18.19
MB Sample Id: 7690724-1-BLK LCS Sample Id: 7690724-1-BKS LCSD Sample Id: 7690724-1-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	1.97	99	1.93	97	55-120	2	20	mg/kg	11.19.19 20:49	
Toluene	<0.00468	2.00	1.93	97	1.84	92	77-120	5	20	mg/kg	11.19.19 20:49	
Ethylbenzene	<0.00616	2.00	1.94	97	1.88	94	77-120	3	20	mg/kg	11.19.19 20:49	
m,p-Xylenes	<0.00682	4.00	3.84	96	3.74	94	78-120	3	20	mg/kg	11.19.19 20:49	
o-Xylene	<0.00682	2.00	1.96	98	1.91	96	78-120	3	20	mg/kg	11.19.19 20:49	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	93		89		85		68-120	%	11.19.19 20:49
a,a,a-Trifluorotoluene	97		92		91		71-121	%	11.19.19 20:49

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
Seq Number: 3108040 Matrix: Soil Date Prep: 11.18.19
Parent Sample Id: 643407-001 MS Sample Id: 643407-001 S MSD Sample Id: 643407-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00835	1.85	1.85	100	1.76	96	54-120	5	25	mg/kg	11.20.19 00:01	
Toluene	<0.00433	1.85	1.81	98	1.72	94	57-120	5	25	mg/kg	11.20.19 00:01	
Ethylbenzene	<0.00569	1.85	1.79	97	1.73	95	58-131	3	25	mg/kg	11.20.19 00:01	
m,p-Xylenes	<0.00630	3.70	3.59	97	3.44	94	62-124	4	25	mg/kg	11.20.19 00:01	
o-Xylene	<0.00630	1.85	1.79	97	1.73	95	62-124	3	25	mg/kg	11.20.19 00:01	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	96		89		68-120	%	11.20.19 00:01
a,a,a-Trifluorotoluene	101		99		71-121	%	11.20.19 00:01

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 643407

Terracon-Lubbock

Rock Daisy Road

Analytical Method: TPH GRO by EPA 8015 Mod. Prep Method: SW5030B

Seq Number: 3108041 Matrix: Solid Date Prep: 11.18.19

MB Sample Id: 7690725-1-BLK LCS Sample Id: 7690725-1-BKS LCSD Sample Id: 7690725-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-GRO	<0.271	20.0	18.7	94	18.6	93	35-129	1	20	mg/kg	11.19.19 21:37	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	82		125	**	111		76-123	%	11.19.19 21:37
a,a,a-Trifluorotoluene	80		89		87		69-120	%	11.19.19 21:37

Analytical Method: TPH GRO by EPA 8015 Mod. Prep Method: SW5030B

Seq Number: 3108041 Matrix: Soil Date Prep: 11.18.19

Parent Sample Id: 643407-001 MS Sample Id: 643407-001 S MSD Sample Id: 643407-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-GRO	<0.269	19.9	19.9	100	17.9	99	35-129	11	20	mg/kg	11.20.19 00:50	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	146	**	129	**	76-123	%	11.20.19 00:50
a,a,a-Trifluorotoluene	106		98		69-120	%	11.20.19 00:50

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

643407

643407

CHAIN OF CUSTODY RECORD

Terracon

Office Location	Lubbock	Laboratory:	Xenco
		Address:	6701 Aberdeen, Lubbock, Texas 79424
		Phone:	
		Contact:	Joseph Guesnier (806-544-9276)
Project Manager	Joseph Guesnier	SRS #:	
Sampler's Name	Bryant McBrayer	Sampler's Signature	

LAB USE ONLY
DUE DATE:
TEMP OF COOLER WHEN RECEIVED (°C): 4.9/4.5 2.9 3.1
Page 1 of 1 56

Project Number: AR197270
Project Name: Rock Daisy Road

ANALYSIS REQUESTED

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	2 oz Glass	4 oz Glass	5035 kit	40 ml VOA	Chloride (EPA Method 300)	TPH Extended 8015	BTEX (EPA Method 8021B)	Hold				Lab Sample ID
S	11/12/2019	11:45		X	CS-1.1 (2-2.5)	2'	2.5'		X			X	X	X					1
S	11/12/2019	12:02		X	CS-2.1 (2-2.5)	2'	2.5'		X			X	X	X					2
S	11/12/2019	12:14		X	CS-3.1 (2-2.5)	2'	2.5'		X			X	X	X					3
S	11/12/2019	12:32		X	CS-4.1 (0-0.5)	0'	0.5'		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:
[signature]	11/14/19	15:55	Brenda Ward		
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

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 ________

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

Inter-Office Shipment

IOS Number : 52395

Date/Time:	11.15.2019	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.:	777003112039	E-Mail:	jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
643407-001	S	CS-1.1 (2.2-5)	11.12.2019 11:45	E300_CL	Chloride by EPA 300	11.20.2019	05.10.2020	JKR	CL	
643407-002	S	CS-2.1 (2.2-5)	11.12.2019 12:02	E300_CL	Chloride by EPA 300	11.20.2019	05.10.2020	JKR	CL	
643407-003	S	CS-3.1 (2.2-5)	11.12.2019 12:14	E300_CL	Chloride by EPA 300	11.20.2019	05.10.2020	JKR	CL	
643407-004	S	CS-4.1 (0-0.5)	11.12.2019 12:32	E300_CL	Chloride by EPA 300	11.20.2019	05.10.2020	JKR	CL	

Inter Office Shipment or Sample Comments:

Relinquished By: Brenda Ward

Brenda Ward

Date Relinquished: 11.15.2019

Received By: Ashly Kowalski

Ashly Kowalski

Date Received: 11.16.2019

Cooler Temperature: 5.4

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 52395

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used : HOU-068

Sent By:	Brenda Ward	**Date Sent:**	11.15.2019 03.29 PM
Received By:	Ashly Kowalski	**Date Received:**	11.16.2019 10.00 AM

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	5.4	
#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: [signature] Ashly Kowalski Date: 11.16.2019

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Terracon-Lubbock

Date/ Time Received: 11/14/2019 03:55:00 PM

Work Order #: 643407

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)?	2.9	
#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**	All test but BTEX 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
Brenda Ward
Date: 11/15/2019

Checklist reviewed by: Jessica Kramer
Jessica Kramer
Date: 11/18/2019

XENCO LABORATORIES

Certificate of Analysis Summary 645585

Terracon-Lubbock, Lubbock, TX

Project Name: Rock Daisy Road

Project Id: AR197270
Contact: Joseph Guesnier
Project Location: Artesia, NM

Date Received in Lab: Fri Dec-06-19 02:41 pm
Report Date: 12-DEC-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	645585-001		645585-002		645585-003		645585-004		645585-005		645585-006	
	Field Id:	SF (4.5-5)		SF (5-5-6)		NW 1 (0-.5)		NW 2 (0-.5)		NW 3 (0-.5)		NW 4 (0-.5)	
	Depth:	4.5-5 ft		4.5-5 ft		4.5-5 ft		4.5-5 ft		4.5-5 ft		4.5-5 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Dec-05-19 13:10		Dec-05-19 13:15		Dec-05-19 12:30		Dec-05-19 12:30		Dec-05-19 12:35		Dec-05-19 12:40	
BTEX by EPA 8021B	*Extracted:*	Dec-10-19 11:00		Dec-10-19 11:00		Dec-10-19 11:00		Dec-10-19 11:00		Dec-10-19 11:00		Dec-10-19 11:00	
	Analyzed:	Dec-11-19 08:10		Dec-11-19 10:33		Dec-11-19 10:57		Dec-11-19 11:20		Dec-11-19 11:44		Dec-11-19 12:07	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00902	0.0200	<0.00895	0.0198	<0.00868	0.0192	<0.00879	0.0195	<0.00840	0.0186	<0.00831	0.0184
Toluene		0.0160 J	0.0200	0.00990 J	0.0198	0.0115 J	0.0192	0.0156 J	0.0195	0.0167 J	0.0186	0.0110 J	0.0184
Ethylbenzene		<0.00615	0.0200	<0.00610	0.0198	<0.00591	0.0192	<0.00599	0.0195	<0.00572	0.0186	<0.00566	0.0184
m,p-Xylenes		<0.00681	0.0399	<0.00675	0.0396	<0.00655	0.0384	<0.00663	0.0389	<0.00634	0.0372	<0.00627	0.0368
o-Xylene		<0.00681	0.0200	<0.00675	0.0198	<0.00655	0.0192	<0.00663	0.0195	<0.00634	0.0186	<0.00627	0.0184
Total Xylenes		<0.00681	0.0200	<0.00675	0.0198	<0.00655	0.0192	<0.00663	0.0195	<0.00634	0.0186	<0.00627	0.0184
Total BTEX		0.0160 J	0.0200	0.00990 J	0.0198	0.0115 J	0.0192	0.0156 J	0.0195	0.0167 J	0.0186	0.0110 J	0.0184
Chloride by EPA 300 SUB: T104704215-19-30	*Extracted:*	Dec-10-19 11:14		Dec-10-19 11:14		Dec-10-19 11:14		Dec-10-19 11:14		Dec-10-19 11:14		Dec-10-19 11:14	
	Analyzed:	Dec-10-19 12:38		Dec-10-19 12:50		Dec-10-19 13:02		Dec-10-19 13:39		Dec-10-19 14:15		Dec-10-19 14:27	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		128	101	354	101	3100 X	10.0	24.9	9.94	3640	101	145	10.1
DRO-ORO By SW8015B	*Extracted:*	Dec-10-19 14:30		Dec-10-19 14:30		Dec-10-19 14:30		Dec-10-19 14:30		Dec-10-19 14:30		Dec-10-19 14:30	
	Analyzed:	Dec-10-19 20:14		Dec-11-19 10:59		Dec-10-19 23:06		Dec-10-19 23:39		Dec-11-19 00:14		Dec-11-19 00:52	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Diesel Range Organics (DRO)		<7.52	25.1	<7.47	25.0	<7.52	25.1	<7.53	25.2	<7.46	24.9	<7.45	24.9
Oil Range Hydrocarbons (ORO)		<7.52	25.1	<7.47	25.0	<7.52	25.1	<7.53	25.2	<7.46	24.9	<7.45	24.9
TPH GRO by EPA 8015 Mod.	*Extracted:*	Dec-10-19 11:00		Dec-10-19 11:00		Dec-10-19 11:00		Dec-10-19 11:00		Dec-10-19 11:00		Dec-10-19 11:00	
	Analyzed:	Dec-11-19 08:10		Dec-11-19 10:33		Dec-11-19 10:57		Dec-11-19 11:20		Dec-11-19 11:44		Dec-11-19 12:07	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
TPH-GRO		<0.270	3.99	0.281 J	3.96	0.267 J	3.84	0.284 J	3.89	<0.252	3.72	<0.249	3.68

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

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 645585

Terracon-Lubbock, Lubbock, TX

Project Name: Rock Daisy Road

Project Id: AR197270
Contact: Joseph Guesnier
Project Location: Artesia, NM

Date Received in Lab: Fri Dec-06-19 02:41 pm
Report Date: 12-DEC-19
Project Manager: Jessica Kramer

Analysis Requested	*Lab Id:*	645585-007		645585-008		645585-009		645585-010			
	Field Id:	SW 4 (0-.5)		SW 3 (0-.5)		SW 2 (0-.5)		SW 1 (0-.5)			
	Depth:	4.5-5 ft		4.5-5 ft		4.5-5 ft		4.5-5 ft			
	Matrix:	SOIL		SOIL		SOIL		SOIL			
	Sampled:	Dec-05-19 12:45		Dec-05-19 12:50		Dec-05-19 13:00		Dec-05-19 13:05			
BTEX by EPA 8021B	*Extracted:*	Dec-10-19 11:00		Dec-10-19 11:00		Dec-10-19 11:00		Dec-10-19 11:00			
	Analyzed:	Dec-11-19 12:31		Dec-11-19 12:55		Dec-11-19 13:19		Dec-11-19 13:43			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Benzene		<0.00866	0.0192	<0.00883	0.0195	<0.00850	0.0188	<0.00864	0.0191		
Toluene		0.0172 J	0.0192	0.0137 J	0.0195	0.0169 J	0.0188	0.0134 J	0.0191		
Ethylbenzene		<0.00590	0.0192	<0.00602	0.0195	<0.00579	0.0188	<0.00589	0.0191		
m,p-Xylenes		<0.00653	0.0383	<0.00666	0.0391	<0.00641	0.0376	<0.00652	0.0382		
o-Xylene		<0.00653	0.0192	<0.00666	0.0195	<0.00641	0.0188	<0.00652	0.0191		
Total Xylenes		<0.00653	0.0192	<0.00666	0.0195	<0.00641	0.0188	<0.00652	0.0191		
Total BTEX		0.0172 J	0.0192	0.0137 J	0.0195	0.0169 J	0.0188	0.0134 J	0.0191		
Chloride by EPA 300 SUB: T104704215-19-30	*Extracted:*	Dec-10-19 11:14		Dec-10-19 11:14		Dec-10-19 11:14		Dec-10-19 11:14			
	Analyzed:	Dec-10-19 14:39		Dec-10-19 14:51		Dec-10-19 15:27		Dec-10-19 15:39			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Chloride		80.7	9.84	69.7	9.98	195	10.0	317	10.1		
DRO-ORO By SW8015B	*Extracted:*	Dec-10-19 14:30		Dec-10-19 14:30		Dec-10-19 14:30		Dec-10-19 14:30			
	Analyzed:	Dec-11-19 01:26		Dec-11-19 02:00		Dec-11-19 11:31		Dec-11-19 03:09			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Diesel Range Organics (DRO)		<7.49	25.0	<7.48	25.0	25.1	25.0	<7.41	24.8		
Oil Range Hydrocarbons (ORO)		<7.49	25.0	<7.48	25.0	<7.47	25.0	<7.41	24.8		
TPH GRO by EPA 8015 Mod.	*Extracted:*	Dec-10-19 11:00		Dec-10-19 11:00		Dec-10-19 11:00		Dec-10-19 11:00			
	Analyzed:	Dec-11-19 12:31		Dec-11-19 12:55		Dec-11-19 13:19		Dec-11-19 13:43			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
TPH-GRO		<0.260	3.83	<0.265	3.91	<0.255	3.76	<0.259	3.82		

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

Version: 1.%

Jessica Kramer

Jessica Kramer
Project Assistant

Analytical Report 645585

for

Terracon-Lubbock

Project Manager: Joseph Guesnier

Rock Daisy Road

AR197270

12-DEC-19

Collected By: Client

6701 Aberdeen, Suite 9 Lubbock, TX 79424

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

12-DEC-19

Project Manager: **Joseph Guesnier**
Terracon-Lubbock
5827 50th st, Suite 1
Lubbock, TX 79424

Reference: XENCO Report No(s): **645585**
Rock Daisy Road
Project Address: Artesia, NM

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) 645585. 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. 645585 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 Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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Sample Cross Reference 645585

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SF (4.5-5)	S	12-05-19 13:10	4.5 - 5 ft	645585-001
SF (5-5-6)	S	12-05-19 13:15	4.5 - 5 ft	645585-002
NW 1 (0-.5)	S	12-05-19 12:30	4.5 - 5 ft	645585-003
NW 2 (0-.5)	S	12-05-19 12:30	4.5 - 5 ft	645585-004
NW 3 (0-.5)	S	12-05-19 12:35	4.5 - 5 ft	645585-005
NW 4 (0-.5)	S	12-05-19 12:40	4.5 - 5 ft	645585-006
SW 4 (0-.5)	S	12-05-19 12:45	4.5 - 5 ft	645585-007
SW 3 (0-.5)	S	12-05-19 12:50	4.5 - 5 ft	645585-008
SW 2 (0-.5)	S	12-05-19 13:00	4.5 - 5 ft	645585-009
SW 1 (0-.5)	S	12-05-19 13:05	4.5 - 5 ft	645585-010

Version: 1.%

CASE NARRATIVE

Client Name: Terracon-Lubbock
Project Name: Rock Daisy Road

Project ID: *AR197270*
Work Order Number(s): *645585*

Report Date: *12-DEC-19*
Date Received: *12/06/2019*

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:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3110027 Chloride by EPA 300
Lab Sample ID 645585-008 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride 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: 645585-001, -002, -003, -004, -005, -006, -007, -008, -009, -010.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3110178 TPH GRO by EPA 8015 Mod.
Surrogate 4-Bromofluorobenzene recovered below QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 645585-007,645585-006.

Batch: LBA-3110180 BTEX by EPA 8021B
Surrogate a,a,a-Trifluorotoluene recovered above QC limits Data confirmed by re-analysis. Samples affected are: 7692221-1-BKS,645585-001 SD,645585-010,645585-004,645585-005,645585-008,645585-009,645585-002,645585-001,645585-003.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3110215 DRO-ORO By SW8015B
Surrogate Tricosane recovered below QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 645585-004.

Certificate of Analytical Results 645585

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id: **SF (4.5-5)**
Lab Sample Id: 645585-001
Matrix: Soil
Date Collected: 12.05.19 13.10
Date Received: 12.06.19 14.41
Sample Depth: 4.5 - 5 ft

Analytical Method: Chloride by EPA 300
Prep Method: E300P
Tech: JYM
% Moisture:
Analyst: JYM
Date Prep: 12.10.19 11.14
Basis: Wet Weight
Seq Number: 3110027
SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**128**	101	3.58	mg/kg	12.10.19 12.38		10

Analytical Method: DRO-ORO By SW8015B
Prep Method: SW8015P
Tech: RNL
% Moisture:
Analyst: RNL
Date Prep: 12.10.19 14.30
Basis: Wet Weight
Seq Number: 3110215

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.52	25.1	7.52	mg/kg	12.10.19 20.14	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.52	25.1	7.52	mg/kg	12.10.19 20.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	68	%	65-144	12.10.19 20.14	
n-Triacontane	638-68-6	77	%	46-152	12.10.19 20.14	

Analytical Method: BTEX by EPA 8021B
Prep Method: SW5030B
Tech: MIT
% Moisture:
Analyst: MIT
Date Prep: 12.10.19 11.00
Basis: Wet Weight
Seq Number: 3110180

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00902	0.0200	0.00902	mg/kg	12.11.19 08.10	U	1
Toluene	108-88-3	**0.0160**	0.0200	0.00467	mg/kg	12.11.19 08.10	J	1
Ethylbenzene	100-41-4	<0.00615	0.0200	0.00615	mg/kg	12.11.19 08.10	U	1
m,p-Xylenes	179601-23-1	<0.00681	0.0399	0.00681	mg/kg	12.11.19 08.10	U	1
o-Xylene	95-47-6	<0.00681	0.0200	0.00681	mg/kg	12.11.19 08.10	U	1
Total Xylenes	1330-20-7	<0.00681	0.0200	0.00681	mg/kg	12.11.19 08.10	U	1
Total BTEX		**0.0160**	0.0200	0.00467	mg/kg	12.11.19 08.10	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	68-120	12.11.19 08.10	
a,a,a-Trifluorotoluene	98-08-8	128	%	71-121	12.11.19 08.10	**

Certificate of Analytical Results 645585

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id:	**SF (4.5-5)**	Matrix:	Soil	Date Received:	12.06.19 14.41
Lab Sample Id:	645585-001	Date Collected:	12.05.19 13.10	Sample Depth:	4.5 - 5 ft

Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	12.10.19 11.00	Basis:	Wet Weight
Seq Number:	3110178				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.270	3.99	0.270	mg/kg	12.11.19 08.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	87	%	76-123	12.11.19 08.10	
a,a,a-Trifluorotoluene	98-08-8	97	%	69-120	12.11.19 08.10	

XENCO LABORATORIES

Certificate of Analytical Results 645585

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id: **SF (5-5-6)**
Lab Sample Id: 645585-002

Matrix: Soil
Date Collected: 12.05.19 13.15

Date Received: 12.06.19 14.41
Sample Depth: 4.5 - 5 ft

Analytical Method: Chloride by EPA 300
Tech: JYM
Analyst: JYM
Seq Number: 3110027

Date Prep: 12.10.19 11.14

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	**354**	101	3.57	mg/kg	12.10.19 12.50		10

Analytical Method: DRO-ORO By SW8015B
Tech: RNL
Analyst: RNL
Seq Number: 3110215

Date Prep: 12.10.19 14.30

Prep Method: SW8015P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.47	25.0	7.47	mg/kg	12.11.19 10.59	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.47	25.0	7.47	mg/kg	12.11.19 10.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	77	%	65-144	12.11.19 10.59	
n-Triacontane	638-68-6	83	%	46-152	12.11.19 10.59	

Analytical Method: BTEX by EPA 8021B
Tech: MIT
Analyst: MIT
Seq Number: 3110180

Date Prep: 12.10.19 11.00

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00895	0.0198	0.00895	mg/kg	12.11.19 10.33	U	1
Toluene	108-88-3	**0.00990**	0.0198	0.00463	mg/kg	12.11.19 10.33	J	1
Ethylbenzene	100-41-4	<0.00610	0.0198	0.00610	mg/kg	12.11.19 10.33	U	1
m,p-Xylenes	179601-23-1	<0.00675	0.0396	0.00675	mg/kg	12.11.19 10.33	U	1
o-Xylene	95-47-6	<0.00675	0.0198	0.00675	mg/kg	12.11.19 10.33	U	1
Total Xylenes	1330-20-7	<0.00675	0.0198	0.00675	mg/kg	12.11.19 10.33	U	1
Total BTEX		**0.00990**	0.0198	0.00463	mg/kg	12.11.19 10.33	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	102	%	68-120	12.11.19 10.33	
a,a,a-Trifluorotoluene	98-08-8	137	%	71-121	12.11.19 10.33	**

Certificate of Analytical Results 645585

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id:	**SF (5-5-6)**	Matrix:	Soil	Date Received:	12.06.19 14.41
Lab Sample Id:	645585-002	Date Collected:	12.05.19 13.15	Sample Depth:	4.5 - 5 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	12.10.19 11.00	Basis:	Wet Weight
Seq Number:	3110178				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	**0.281**	3.96	0.268	mg/kg	12.11.19 10.33	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	84	%	76-123	12.11.19 10.33	
a,a,a-Trifluorotoluene	98-08-8	105	%	69-120	12.11.19 10.33	

Certificate of Analytical Results 645585

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id: **NW 1 (0-.5)**
Lab Sample Id: 645585-003

Matrix: Soil
Date Collected: 12.05.19 12.30

Date Received: 12.06.19 14.41
Sample Depth: 4.5 - 5 ft

Analytical Method: Chloride by EPA 300
Tech: JYM
Analyst: JYM
Seq Number: 3110027

Date Prep: 12.10.19 11.14

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	**3100**	10.0	0.355	mg/kg	12.10.19 13.02	X	1

Analytical Method: DRO-ORO By SW8015B
Tech: RNL
Analyst: RNL
Seq Number: 3110215

Date Prep: 12.10.19 14.30

Prep Method: SW8015P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.52	25.1	7.52	mg/kg	12.10.19 23.06	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.52	25.1	7.52	mg/kg	12.10.19 23.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	75	%	65-144	12.10.19 23.06	
n-Triacontane	638-68-6	83	%	46-152	12.10.19 23.06	

Analytical Method: BTEX by EPA 8021B
Tech: MIT
Analyst: MIT
Seq Number: 3110180

Date Prep: 12.10.19 11.00

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00868	0.0192	0.00868	mg/kg	12.11.19 10.57	U	1
Toluene	108-88-3	**0.0115**	0.0192	0.00449	mg/kg	12.11.19 10.57	J	1
Ethylbenzene	100-41-4	<0.00591	0.0192	0.00591	mg/kg	12.11.19 10.57	U	1
m,p-Xylenes	179601-23-1	<0.00655	0.0384	0.00655	mg/kg	12.11.19 10.57	U	1
o-Xylene	95-47-6	<0.00655	0.0192	0.00655	mg/kg	12.11.19 10.57	U	1
Total Xylenes	1330-20-7	<0.00655	0.0192	0.00655	mg/kg	12.11.19 10.57	U	1
Total BTEX		**0.0115**	0.0192	0.00449	mg/kg	12.11.19 10.57	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	95	%	68-120	12.11.19 10.57	
a,a,a-Trifluorotoluene	98-08-8	130	%	71-121	12.11.19 10.57	**

Certificate of Analytical Results 645585

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id:	**NW 1 (0-.5)**	Matrix:	Soil	Date Received:	12.06.19 14.41
Lab Sample Id:	645585-003	Date Collected:	12.05.19 12.30	Sample Depth:	4.5 - 5 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	12.10.19 11.00	Basis:	Wet Weight
Seq Number:	3110178				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	**0.267**	3.84	0.260	mg/kg	12.11.19 10.57	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	79	%	76-123	12.11.19 10.57	
a,a,a-Trifluorotoluene	98-08-8	99	%	69-120	12.11.19 10.57	

XENCO LABORATORIES

Certificate of Analytical Results 645585

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id: **NW 2 (0-.5)** Matrix: Soil Date Received: 12.06.19 14.41
Lab Sample Id: 645585-004 Date Collected: 12.05.19 12.30 Sample Depth: 4.5 - 5 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: JYM % Moisture:
Analyst: JYM Date Prep: 12.10.19 11.14 Basis: Wet Weight
Seq Number: 3110027 SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**24.9**	9.94	0.352	mg/kg	12.10.19 13.39		1

Analytical Method: DRO-ORO By SW8015B Prep Method: SW8015P
Tech: RNL % Moisture:
Analyst: RNL Date Prep: 12.10.19 14.30 Basis: Wet Weight
Seq Number: 3110215

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.53	25.2	7.53	mg/kg	12.10.19 23.39	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.53	25.2	7.53	mg/kg	12.10.19 23.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	59	%	65-144	12.10.19 23.39	**
n-Triacontane	638-68-6	66	%	46-152	12.10.19 23.39	

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
Tech: MIT % Moisture:
Analyst: MIT Date Prep: 12.10.19 11.00 Basis: Wet Weight
Seq Number: 3110180

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00879	0.0195	0.00879	mg/kg	12.11.19 11.20	U	1
Toluene	108-88-3	**0.0156**	0.0195	0.00455	mg/kg	12.11.19 11.20	J	1
Ethylbenzene	100-41-4	<0.00599	0.0195	0.00599	mg/kg	12.11.19 11.20	U	1
m,p-Xylenes	179601-23-1	<0.00663	0.0389	0.00663	mg/kg	12.11.19 11.20	U	1
o-Xylene	95-47-6	<0.00663	0.0195	0.00663	mg/kg	12.11.19 11.20	U	1
Total Xylenes	1330-20-7	<0.00663	0.0195	0.00663	mg/kg	12.11.19 11.20	U	1
Total BTEX		**0.0156**	0.0195	0.00455	mg/kg	12.11.19 11.20	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	111	%	68-120	12.11.19 11.20	
a,a,a-Trifluorotoluene	98-08-8	142	%	71-121	12.11.19 11.20	**

Certificate of Analytical Results 645585

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id: **NW 2 (0-.5)** | Matrix: Soil | Date Received: 12.06.19 14.41
Lab Sample Id: 645585-004 | Date Collected: 12.05.19 12.30 | Sample Depth: 4.5 - 5 ft

Analytical Method: TPH GRO by EPA 8015 Mod. | Prep Method: SW5030B
Tech: MIT | % Moisture:
Analyst: MIT | Date Prep: 12.10.19 11.00 | Basis: Wet Weight
Seq Number: 3110178

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	**0.284**	3.89	0.264	mg/kg	12.11.19 11.20	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	91	%	76-123	12.11.19 11.20	
a,a,a-Trifluorotoluene	98-08-8	108	%	69-120	12.11.19 11.20	

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Certificate of Analytical Results 645585

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id: **NW 3 (0-.5)**
Lab Sample Id: 645585-005
Matrix: Soil
Date Collected: 12.05.19 12.35
Date Received: 12.06.19 14.41
Sample Depth: 4.5 - 5 ft

Analytical Method: Chloride by EPA 300
Prep Method: E300P
Tech: JYM
% Moisture:
Analyst: JYM
Date Prep: 12.10.19 11.14
Basis: Wet Weight
Seq Number: 3110027
SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**3640**	101	3.59	mg/kg	12.10.19 14.15		10

Analytical Method: DRO-ORO By SW8015B
Prep Method: SW8015P
Tech: RNL
% Moisture:
Analyst: RNL
Date Prep: 12.10.19 14.30
Basis: Wet Weight
Seq Number: 3110215

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.46	24.9	7.46	mg/kg	12.11.19 00.14	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.46	24.9	7.46	mg/kg	12.11.19 00.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	69	%	65-144	12.11.19 00.14	
n-Triacontane	638-68-6	76	%	46-152	12.11.19 00.14	

Analytical Method: BTEX by EPA 8021B
Prep Method: SW5030B
Tech: MIT
% Moisture:
Analyst: MIT
Date Prep: 12.10.19 11.00
Basis: Wet Weight
Seq Number: 3110180

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00840	0.0186	0.00840	mg/kg	12.11.19 11.44	U	1
Toluene	108-88-3	**0.0167**	0.0186	0.00435	mg/kg	12.11.19 11.44	J	1
Ethylbenzene	100-41-4	<0.00572	0.0186	0.00572	mg/kg	12.11.19 11.44	U	1
m,p-Xylenes	179601-23-1	<0.00634	0.0372	0.00634	mg/kg	12.11.19 11.44	U	1
o-Xylene	95-47-6	<0.00634	0.0186	0.00634	mg/kg	12.11.19 11.44	U	1
Total Xylenes	1330-20-7	<0.00634	0.0186	0.00634	mg/kg	12.11.19 11.44	U	1
Total BTEX		**0.0167**	0.0186	0.00435	mg/kg	12.11.19 11.44	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	91	%	68-120	12.11.19 11.44	
a,a,a-Trifluorotoluene	98-08-8	124	%	71-121	12.11.19 11.44	**

Certificate of Analytical Results 645585

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id:	**NW 3 (0-.5)**	Matrix:	Soil	Date Received:	12.06.19 14.41
Lab Sample Id:	645585-005	Date Collected:	12.05.19 12.35	Sample Depth:	4.5 - 5 ft

Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	12.10.19 11.00	Basis:	Wet Weight
Seq Number:	3110178				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.252	3.72	0.252	mg/kg	12.11.19 11.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	76	%	76-123	12.11.19 11.44	
a,a,a-Trifluorotoluene	98-08-8	95	%	69-120	12.11.19 11.44	

Certificate of Analytical Results 645585

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id: **NW 4 (0-.5)**
Lab Sample Id: 645585-006
Matrix: Soil
Date Collected: 12.05.19 12.40
Date Received: 12.06.19 14.41
Sample Depth: 4.5 - 5 ft

Analytical Method: Chloride by EPA 300
Tech: JYM
Analyst: JYM
Seq Number: 3110027
Date Prep: 12.10.19 11.14
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	**145**	10.1	0.357	mg/kg	12.10.19 14.27		1

Analytical Method: DRO-ORO By SW8015B
Tech: RNL
Analyst: RNL
Seq Number: 3110215
Date Prep: 12.10.19 14.30
Prep Method: SW8015P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.45	24.9	7.45	mg/kg	12.11.19 00.52	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.45	24.9	7.45	mg/kg	12.11.19 00.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	71	%	65-144	12.11.19 00.52	
n-Triacontane	638-68-6	81	%	46-152	12.11.19 00.52	

Analytical Method: BTEX by EPA 8021B
Tech: MIT
Analyst: MIT
Seq Number: 3110180
Date Prep: 12.10.19 11.00
Prep Method: SW5030B
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00831	0.0184	0.00831	mg/kg	12.11.19 12.07	U	1
Toluene	108-88-3	**0.0110**	0.0184	0.00430	mg/kg	12.11.19 12.07	J	1
Ethylbenzene	100-41-4	<0.00566	0.0184	0.00566	mg/kg	12.11.19 12.07	U	1
m,p-Xylenes	179601-23-1	<0.00627	0.0368	0.00627	mg/kg	12.11.19 12.07	U	1
o-Xylene	95-47-6	<0.00627	0.0184	0.00627	mg/kg	12.11.19 12.07	U	1
Total Xylenes	1330-20-7	<0.00627	0.0184	0.00627	mg/kg	12.11.19 12.07	U	1
Total BTEX		**0.0110**	0.0184	0.00430	mg/kg	12.11.19 12.07	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	83	%	68-120	12.11.19 12.07	
a,a,a-Trifluorotoluene	98-08-8	110	%	71-121	12.11.19 12.07	

Certificate of Analytical Results 645585

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id:	**NW 4 (0-.5)**	Matrix:	Soil	Date Received:	12.06.19 14.41
Lab Sample Id:	645585-006	Date Collected:	12.05.19 12.40	Sample Depth:	4.5 - 5 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	12.10.19 11.00	Basis:	Wet Weight
Seq Number:	3110178				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.249	3.68	0.249	mg/kg	12.11.19 12.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	68	%	76-123	12.11.19 12.07	**
a,a,a-Trifluorotoluene	98-08-8	84	%	69-120	12.11.19 12.07	

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Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id:	**SW 4 (0-.5)**	Matrix:	Soil	Date Received:	12.06.19 14.41
Lab Sample Id:	645585-007	Date Collected:	12.05.19 12.45	Sample Depth:	4.5 - 5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	12.10.19 11.14	Basis:	Wet Weight
Seq Number:	3110027			SUB: T104704215-19-30	

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**80.7**	9.84	0.348	mg/kg	12.10.19 14.39		1

Analytical Method:	DRO-ORO By SW8015B			Prep Method:	SW8015P
Tech:	RNL			% Moisture:	
Analyst:	RNL	Date Prep:	12.10.19 14.30	Basis:	Wet Weight
Seq Number:	3110215				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.49	25.0	7.49	mg/kg	12.11.19 01.26	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.49	25.0	7.49	mg/kg	12.11.19 01.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	65	%	65-144	12.11.19 01.26	
n-Triacontane	638-68-6	73	%	46-152	12.11.19 01.26	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	12.10.19 11.00	Basis:	Wet Weight
Seq Number:	3110180				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00866	0.0192	0.00866	mg/kg	12.11.19 12.31	U	1
Toluene	108-88-3	**0.0172**	0.0192	0.00448	mg/kg	12.11.19 12.31	J	1
Ethylbenzene	100-41-4	<0.00590	0.0192	0.00590	mg/kg	12.11.19 12.31	U	1
m,p-Xylenes	179601-23-1	<0.00653	0.0383	0.00653	mg/kg	12.11.19 12.31	U	1
o-Xylene	95-47-6	<0.00653	0.0192	0.00653	mg/kg	12.11.19 12.31	U	1
Total Xylenes	1330-20-7	<0.00653	0.0192	0.00653	mg/kg	12.11.19 12.31	U	1
Total BTEX		**0.0172**	0.0192	0.00448	mg/kg	12.11.19 12.31	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	77	%	68-120	12.11.19 12.31	
a,a,a-Trifluorotoluene	98-08-8	109	%	71-121	12.11.19 12.31	

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Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id:	**SW 4 (0-.5)**	Matrix:	Soil	Date Received:	12.06.19 14.41
Lab Sample Id:	645585-007	Date Collected:	12.05.19 12.45	Sample Depth:	4.5 - 5 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	12.10.19 11.00	Basis:	Wet Weight
Seq Number:	3110178				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.260	3.83	0.260	mg/kg	12.11.19 12.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	64	%	76-123	12.11.19 12.31	**
a,a,a-Trifluorotoluene	98-08-8	83	%	69-120	12.11.19 12.31	

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Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id:	**SW 3 (0-.5)**	Matrix:	Soil	Date Received:	12.06.19 14.41
Lab Sample Id:	645585-008	Date Collected:	12.05.19 12.50	Sample Depth:	4.5 - 5 ft

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Tech: JYM — % Moisture:
Analyst: JYM — Date Prep: 12.10.19 11.14 — Basis: Wet Weight
Seq Number: 3110027 — SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**69.7**	9.98	0.353	mg/kg	12.10.19 14.51		1

Analytical Method: DRO-ORO By SW8015B — Prep Method: SW8015P
Tech: RNL — % Moisture:
Analyst: RNL — Date Prep: 12.10.19 14.30 — Basis: Wet Weight
Seq Number: 3110215

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.48	25.0	7.48	mg/kg	12.11.19 02.00	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.48	25.0	7.48	mg/kg	12.11.19 02.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	74	%	65-144	12.11.19 02.00	
n-Triacontane	638-68-6	80	%	46-152	12.11.19 02.00	

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Tech: MIT — % Moisture:
Analyst: MIT — Date Prep: 12.10.19 11.00 — Basis: Wet Weight
Seq Number: 3110180

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00883	0.0195	0.00883	mg/kg	12.11.19 12.55	U	1
Toluene	108-88-3	**0.0137**	0.0195	0.00457	mg/kg	12.11.19 12.55	J	1
Ethylbenzene	100-41-4	<0.00602	0.0195	0.00602	mg/kg	12.11.19 12.55	U	1
m,p-Xylenes	179601-23-1	<0.00666	0.0391	0.00666	mg/kg	12.11.19 12.55	U	1
o-Xylene	95-47-6	<0.00666	0.0195	0.00666	mg/kg	12.11.19 12.55	U	1
Total Xylenes	1330-20-7	<0.00666	0.0195	0.00666	mg/kg	12.11.19 12.55	U	1
Total BTEX		**0.0137**	0.0195	0.00457	mg/kg	12.11.19 12.55	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	108	%	68-120	12.11.19 12.55	
a,a,a-Trifluorotoluene	98-08-8	141	%	71-121	12.11.19 12.55	**

Certificate of Analytical Results 645585

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id: **SW 3 (0-.5)**
Lab Sample Id: 645585-008
Matrix: Soil
Date Collected: 12.05.19 12.50
Date Received: 12.06.19 14.41
Sample Depth: 4.5 - 5 ft

Analytical Method: TPH GRO by EPA 8015 Mod.
Prep Method: SW5030B
Tech: MIT
% Moisture:
Analyst: MIT
Date Prep: 12.10.19 11.00
Basis: Wet Weight
Seq Number: 3110178

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.265	3.91	0.265	mg/kg	12.11.19 12.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	89	%	76-123	12.11.19 12.55	
a,a,a-Trifluorotoluene	98-08-8	107	%	69-120	12.11.19 12.55	

XENCO LABORATORIES

Certificate of Analytical Results 645585

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id: **SW 2 (0-.5)**
Lab Sample Id: 645585-009
Matrix: Soil
Date Collected: 12.05.19 13.00
Date Received: 12.06.19 14.41
Sample Depth: 4.5 - 5 ft

Analytical Method: Chloride by EPA 300
Tech: JYM
Analyst: JYM
Seq Number: 3110027
Date Prep: 12.10.19 11.14
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	**195**	10.0	0.355	mg/kg	12.10.19 15.27		1

Analytical Method: DRO-ORO By SW8015B
Tech: RNL
Analyst: RNL
Seq Number: 3110215
Date Prep: 12.10.19 14.30
Prep Method: SW8015P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	**25.1**	25.0	7.47	mg/kg	12.11.19 11.31		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.47	25.0	7.47	mg/kg	12.11.19 11.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	77	%	65-144	12.11.19 11.31	
n-Triacontane	638-68-6	79	%	46-152	12.11.19 11.31	

Analytical Method: BTEX by EPA 8021B
Tech: MIT
Analyst: MIT
Seq Number: 3110180
Date Prep: 12.10.19 11.00
Prep Method: SW5030B
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00850	0.0188	0.00850	mg/kg	12.11.19 13.19	U	1
Toluene	108-88-3	**0.0169**	0.0188	0.00440	mg/kg	12.11.19 13.19	J	1
Ethylbenzene	100-41-4	<0.00579	0.0188	0.00579	mg/kg	12.11.19 13.19	U	1
m,p-Xylenes	179601-23-1	<0.00641	0.0376	0.00641	mg/kg	12.11.19 13.19	U	1
o-Xylene	95-47-6	<0.00641	0.0188	0.00641	mg/kg	12.11.19 13.19	U	1
Total Xylenes	1330-20-7	<0.00641	0.0188	0.00641	mg/kg	12.11.19 13.19	U	1
Total BTEX		**0.0169**	0.0188	0.00440	mg/kg	12.11.19 13.19	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	68-120	12.11.19 13.19	
a,a,a-Trifluorotoluene	98-08-8	139	%	71-121	12.11.19 13.19	**

Certificate of Analytical Results 645585

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id:	**SW 2 (0-.5)**	Matrix:	Soil	Date Received:	12.06.19 14.41
Lab Sample Id:	645585-009	Date Collected:	12.05.19 13.00	Sample Depth:	4.5 - 5 ft

Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	12.10.19 11.00	Basis:	Wet Weight
Seq Number:	3110178				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.255	3.76	0.255	mg/kg	12.11.19 13.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	85	%	76-123	12.11.19 13.19	
a,a,a-Trifluorotoluene	98-08-8	105	%	69-120	12.11.19 13.19	

Certificate of Analytical Results 645585

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id: **SW 1 (0-.5)**
Lab Sample Id: 645585-010

Matrix: Soil
Date Collected: 12.05.19 13.05

Date Received: 12.06.19 14.41
Sample Depth: 4.5 - 5 ft

Analytical Method: Chloride by EPA 300
Tech: JYM
Analyst: JYM
Seq Number: 3110027

Date Prep: 12.10.19 11.14

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	**317**	10.1	0.356	mg/kg	12.10.19 15.39		1

Analytical Method: DRO-ORO By SW8015B
Tech: RNL
Analyst: RNL
Seq Number: 3110215

Date Prep: 12.10.19 14.30

Prep Method: SW8015P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.41	24.8	7.41	mg/kg	12.11.19 03.09	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.41	24.8	7.41	mg/kg	12.11.19 03.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	87	%	65-144	12.11.19 03.09	
n-Triacontane	638-68-6	97	%	46-152	12.11.19 03.09	

Analytical Method: BTEX by EPA 8021B
Tech: MIT
Analyst: MIT
Seq Number: 3110180

Date Prep: 12.10.19 11.00

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00864	0.0191	0.00864	mg/kg	12.11.19 13.43	U	1
Toluene	108-88-3	**0.0134**	0.0191	0.00447	mg/kg	12.11.19 13.43	J	1
Ethylbenzene	100-41-4	<0.00589	0.0191	0.00589	mg/kg	12.11.19 13.43	U	1
m,p-Xylenes	179601-23-1	<0.00652	0.0382	0.00652	mg/kg	12.11.19 13.43	U	1
o-Xylene	95-47-6	<0.00652	0.0191	0.00652	mg/kg	12.11.19 13.43	U	1
Total Xylenes	1330-20-7	<0.00652	0.0191	0.00652	mg/kg	12.11.19 13.43	U	1
Total BTEX		**0.0134**	0.0191	0.00447	mg/kg	12.11.19 13.43	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	99	%	68-120	12.11.19 13.43	
a,a,a-Trifluorotoluene	98-08-8	139	%	71-121	12.11.19 13.43	**

Certificate of Analytical Results 645585

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id:	**SW 1 (0-.5)**	Matrix:	Soil	Date Received:	12.06.19 14.41
Lab Sample Id:	645585-010	Date Collected:	12.05.19 13.05	Sample Depth:	4.5 - 5 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	12.10.19 11.00	Basis:	Wet Weight
Seq Number:	3110178				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.259	3.82	0.259	mg/kg	12.11.19 13.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	82	%	76-123	12.11.19 13.43	
a,a,a-Trifluorotoluene	98-08-8	106	%	69-120	12.11.19 13.43	

XENCO LABORATORIES

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.

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 645585

Terracon-Lubbock
Rock Daisy Road

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3110027 — Matrix: Solid — Date Prep: 12.10.19
MB Sample Id: 7692061-1-BLK — LCS Sample Id: 7692061-1-BKS — LCSD Sample Id: 7692061-1-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	107	107	107	107	80-120	0	20	mg/kg	12.10.19 12:02	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3110027 — Matrix: Soil — Date Prep: 12.10.19
Parent Sample Id: 645585-003 — MS Sample Id: 645585-003 S — MSD Sample Id: 645585-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	3100	99.8	3130	30	3140	40	80-120	0	20	mg/kg	12.10.19 13:14	X

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3110027 — Matrix: Soil — Date Prep: 12.10.19
Parent Sample Id: 645585-008 — MS Sample Id: 645585-008 S — MSD Sample Id: 645585-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	69.7	99.6	167	98	167	97	80-120	0	20	mg/kg	12.10.19 15:03	

Analytical Method: DRO-ORO By SW8015B — Prep Method: SW8015P
Seq Number: 3110215 — Matrix: Solid — Date Prep: 12.10.19
MB Sample Id: 7692248-1-BLK — LCS Sample Id: 7692248-1-BKS — LCSD Sample Id: 7692248-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Diesel Range Organics (DRO)	<7.48	100	123	123	115	115	63-139	7	20	mg/kg	12.11.19 12:39	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
Tricosane	91		105		99		65-144	%	12.11.19 12:39
n-Triacontane	103		106		103		46-152	%	12.11.19 12:39

Analytical Method: DRO-ORO By SW8015B — Prep Method: SW8015P
Seq Number: 3110215 — Matrix: Solid — Date Prep: 12.10.19
MB Sample Id: 7692248-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Oil Range Hydrocarbons (ORO)	<7.48	mg/kg	12.10.19 19:40	

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 645585

Terracon-Lubbock

Rock Daisy Road

Analytical Method: DRO-ORO By SW8015B Prep Method: SW8015P
Seq Number: 3110215 Matrix: Soil Date Prep: 12.10.19
Parent Sample Id: 645585-001 MS Sample Id: 645585-001 S MSD Sample Id: 645585-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Diesel Range Organics (DRO)	<7.49	100	79.6	80	77.8	78	63-139	2	20	mg/kg	12.10.19 20:48	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
Tricosane	83		83		65-144	%	12.10.19 20:48
n-Triacontane	91		92		46-152	%	12.10.19 20:48

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
Seq Number: 3110180 Matrix: Solid Date Prep: 12.10.19
MB Sample Id: 7692221-1-BLK LCS Sample Id: 7692221-1-BKS LCSD Sample Id: 7692221-1-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	2.05	103	1.98	99	55-120	3	20	mg/kg	12.11.19 05:19	
Toluene	<0.00468	2.00	2.05	103	2.00	100	77-120	2	20	mg/kg	12.11.19 05:19	
Ethylbenzene	<0.00616	2.00	2.10	105	2.11	106	77-120	0	20	mg/kg	12.11.19 05:19	
m,p-Xylenes	<0.00682	4.00	4.20	105	4.22	106	78-120	0	20	mg/kg	12.11.19 05:19	
o-Xylene	<0.00682	2.00	2.15	108	2.15	108	78-120	0	20	mg/kg	12.11.19 05:19	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	103		104		82		68-120	%	12.11.19 05:19
a,a,a-Trifluorotoluene	121		123	**	95		71-121	%	12.11.19 05:19

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
Seq Number: 3110180 Matrix: Soil Date Prep: 12.10.19
Parent Sample Id: 645585-001 MS Sample Id: 645585-001 S MSD Sample Id: 645585-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00864	1.91	2.07	108	1.95	100	54-120	6	25	mg/kg	12.11.19 08:34	
Toluene	0.0160	1.91	2.11	110	1.91	97	57-120	10	25	mg/kg	12.11.19 08:34	
Ethylbenzene	<0.00589	1.91	2.11	110	1.94	99	58-131	8	25	mg/kg	12.11.19 08:34	
m,p-Xylenes	<0.00652	3.82	4.20	110	3.86	99	62-124	8	25	mg/kg	12.11.19 08:34	
o-Xylene	<0.00652	1.91	2.06	108	1.93	99	62-124	7	25	mg/kg	12.11.19 08:34	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	89		97		68-120	%	12.11.19 08:34
a,a,a-Trifluorotoluene	114		127	**	71-121	%	12.11.19 08:34

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 645585

Terracon-Lubbock

Rock Daisy Road

Analytical Method: **TPH GRO by EPA 8015 Mod.** Prep Method: SW5030B

Seq Number: 3110178 Matrix: Solid Date Prep: 12.10.19

MB Sample Id: 7692222-1-BLK LCS Sample Id: 7692222-1-BKS LCSD Sample Id: 7692222-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-GRO	<0.271	20.0	19.1	96	19.6	98	35-129	3	20	mg/kg	12.11.19 06:08	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	85		119		109		76-123	%	12.11.19 06:08
a,a,a-Trifluorotoluene	93		94		81		69-120	%	12.11.19 06:08

Analytical Method: **TPH GRO by EPA 8015 Mod.** Prep Method: SW5030B

Seq Number: 3110178 Matrix: Soil Date Prep: 12.10.19

Parent Sample Id: 645585-001 MS Sample Id: 645585-001 S MSD Sample Id: 645585-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-GRO	<0.268	19.8	18.1	91	17.2	87	35-129	5	20	mg/kg	12.11.19 09:22	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	128	**	114		76-123	%	12.11.19 09:22
a,a,a-Trifluorotoluene	109		108		69-120	%	12.11.19 09:22

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	

645585

XENCO LABORATORIES

Chain of Custody

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432) 704-5440 EL Paso,TX (915) 585-3443 Lubbock,TX (806) 794-1296 Craslbad, NM (432) 704-5440
Phoenix,AZ (480) 355-0900 Atlanta,GA (770) 449-8800 Tampa,FL (813) 620-2000 West Palm Beach, FL (561) 689-6701

Work Order No: 645585

www.xenco.com Page ____ of ____

Project Manager:	Joseph Guesnier	Bill to: (if different)	
Company Name:	Terracon (LBK)	Company Name:	
Address:		Address:	
City, State ZIP:		City, State ZIP:	
Phone:	(806) 544-9276	Email:	

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Rock Daizy Road	Turn Around	
Project Number:	AR197270	Routine	☑
Project Location	Artesia, NM	Rush:	
Sampler's Name:	Bryant Mubreyer	Due Date:	
PO #:		Quote #:	

SAMPLE RECEIPT

Temp Blank:	Yes No (circled)	Wet Ice:	Yes (circled) No
Temperature (°C):	4.8 / 4.8	Thermometer ID	TR-4
Received Intact:	Yes (circled) No		
Cooler Custody Seals:	Yes No N/A (circled)	Correction Factor:	0
Sample Custody Seals:	Yes No N/A (circled)	Total Containers:	

ANALYSIS REQUEST

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Chloride (epa 300)	TPH extended 8015	BTX (8021B)	Sample Comments
	SF (4.5-5)	S	12-5-19	13:10	4.5-5'	1	X	X	X	1
	SF (5.5-6)	S	↓	13:15	5.5-6'	1	X	X	X	2
	NW-1 (0-.5)	S	↓	12:30	0-.5'	1	X	X	X	3
	NW-2 (0-.5)	S	↓	12:35	↓	1	X	X	X	4
	NW-3 (0-.5)	S	↓	12:40	↓	1	X	X	X	5
	NW-4 (0-.5)	S	↓	12:45	↓	1	X	X	X	6
	SW-4 (0-.5)	S	↓	12:50	↓	1	X	X	X	7
	SW-3 (0-.5)	S	↓	12:55	↓	1	X	X	X	8
	SW-2 (0-.5)	S	↓	13:00	↓	1	X	X	X	9
	SW-1 (0-.5)	S	↓	13:05	↓	1	X	X	X	10

Preservative Codes: MeOH: Me; None: NO; HNO3: HN; H2S04: H2; HCL: HL; NaOH: Na; Zn Acetate+ NaOH: Zn

TAT starts the day recevied by the lab, if received by 4:00pm

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010**: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U **1631 / 245.1 / 7470 / 7471** : Hg

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time		Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	[signature]	Brenda Ward	12-6-19 14:41	2			
3				4			
5				6			

Revised Date 022619 Rev. 2019.1

Inter-Office Shipment

IOS Number : 53797

Date/Time: 12.09.2019
Lab# From: **Lubbock**
Lab# To: **Houston**

Created by: Brenda Ward
Delivery Priority:
Air Bill No.: 777194246840

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
645585-001	S	SF (4.5-5)	12.05.2019 13:10	E300_CL	Chloride by EPA 300	**12.12.2019**	06.02.2020	JKR	CL	
645585-002	S	SF (5-5-6)	12.05.2019 13:15	E300_CL	Chloride by EPA 300	**12.12.2019**	06.02.2020	JKR	CL	
645585-003	S	NW 1 (0-.5)	12.05.2019 12:30	E300_CL	Chloride by EPA 300	**12.12.2019**	06.02.2020	JKR	CL	
645585-004	S	NW 2 (0-.5)	12.05.2019 12:30	E300_CL	Chloride by EPA 300	**12.12.2019**	06.02.2020	JKR	CL	
645585-005	S	NW 3 (0-.5)	12.05.2019 12:35	E300_CL	Chloride by EPA 300	**12.12.2019**	06.02.2020	JKR	CL	
645585-006	S	NW 4 (0-.5)	12.05.2019 12:40	E300_CL	Chloride by EPA 300	**12.12.2019**	06.02.2020	JKR	CL	
645585-007	S	SW 4 (0-.5)	12.05.2019 12:45	E300_CL	Chloride by EPA 300	**12.12.2019**	06.02.2020	JKR	CL	
645585-008	S	SW 3 (0-.5)	12.05.2019 12:50	E300_CL	Chloride by EPA 300	**12.12.2019**	06.02.2020	JKR	CL	
645585-009	S	SW 2 (0-.5)	12.05.2019 13:00	E300_CL	Chloride by EPA 300	**12.12.2019**	06.02.2020	JKR	CL	
645585-010	S	SW 1 (0-.5)	12.05.2019 13:05	E300_CL	Chloride by EPA 300	**12.12.2019**	06.02.2020	JKR	CL	

Inter Office Shipment or Sample Comments:

Relinquished By: Brenda Ward
Brenda Ward

Date Relinquished: 12.09.2019

Received By: Ashly Kowalski

Date Received: 12.10.2019

Cooler Temperature: 3.8

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 53797

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used : HOU-068

Sent By:	Brenda Ward	**Date Sent:**	12.09.2019 02.51 PM
Received By:	Ashly Kowalski	**Date Received:**	12.10.2019 09.30 AM

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	3.8	
#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: Ashly Kowalski   Date: 12.10.2019

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Terracon-Lubbock

Date/ Time Received: 12/06/2019 02:41:00 PM

Work Order #: 645585

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?	**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?	**N/A**	
#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**	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
Brenda Ward
Date: 12/09/2019

Checklist reviewed by: Jessica Kramer
Jessica Kramer
Date: 12/12/2019

XENCO LABORATORIES

Certificate of Analysis Summary 648316

Terracon-Lubbock, Lubbock, TX

Project Name: Rock Daisy Road

Project Id: AR197270
Contact: Joseph Guesnier
Project Location: Client: Spur

Date Received in Lab: Wed Jan-08-20 09:30 am
Report Date: 15-JAN-20
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	648316-001		648316-002		648316-003		648316-004		648316-005		648316-006	
	Field Id:	NW-1-1 (1.5-2)		NW-3-1 (1.5-2)		FS-1 (3.5-4)		FS-2 (3.5-4)		FS-3 (3.5-4)		FS-4 (3.5-4)	
	Depth:	1.5-2		1.5-2		3.5-4		3.5-4		3.5-4		3.5-4	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-06-20 14:45		Jan-06-20 14:50		Jan-06-20 14:55		Jan-06-20 15:00		Jan-06-20 15:05		Jan-06-20 15:10	
BTEX by EPA 8021B	*Extracted:*	Jan-09-20 13:00		Jan-09-20 13:00		Jan-09-20 13:00		Jan-09-20 13:00		Jan-09-20 13:00		Jan-09-20 13:00	
	Analyzed:	Jan-09-20 21:55		Jan-10-20 00:20		Jan-10-20 00:44		Jan-10-20 01:08		Jan-10-20 01:32		Jan-10-20 01:57	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00895	0.0198	<0.00876	0.0194	<0.00842	0.0186	<0.00892	0.0197	<0.00892	0.0197	<0.00895	0.0198
Toluene		<0.00463	0.0198	<0.00453	0.0194	<0.00436	0.0186	<0.00462	0.0197	<0.00462	0.0197	<0.00463	0.0198
Ethylbenzene		<0.00610	0.0198	<0.00597	0.0194	<0.00574	0.0186	<0.00607	0.0197	<0.00607	0.0197	<0.00610	0.0198
m,p-Xylenes		<0.00675	0.0396	<0.00661	0.0388	<0.00635	0.0372	<0.00673	0.0394	<0.00673	0.0394	<0.00675	0.0396
o-Xylene		<0.00675	0.0198	<0.00661	0.0194	<0.00635	0.0186	<0.00673	0.0197	<0.00673	0.0197	<0.00675	0.0198
Total Xylenes		<0.00675	0.0198	<0.00661	0.0194	<0.00635	0.0186	<0.00673	0.0197	<0.00673	0.0197	<0.00675	0.0198
Total BTEX		<0.00463	0.0198	<0.00453	0.0194	<0.00436	0.0186	<0.00462	0.0197	<0.00462	0.0197	<0.00463	0.0198
Chloride by EPA 300 SUB: T104704215-19-30	*Extracted:*	Jan-13-20 14:10		Jan-13-20 14:10		Jan-13-20 14:10		Jan-13-20 14:10		Jan-13-20 14:10		Jan-13-20 14:10	
	Analyzed:	Jan-13-20 14:27		Jan-13-20 14:36		Jan-13-20 15:04		Jan-13-20 15:31		Jan-13-20 15:41		Jan-13-20 16:08	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		2790	9.98	46.0	10.0	99.1	10.0	87.0	9.84	32.3	10.1	72.0	10.1
DRO-ORO By SW8015B	*Extracted:*	Jan-09-20 14:30		Jan-09-20 14:30		Jan-09-20 14:30		Jan-09-20 14:30		Jan-09-20 14:30		Jan-09-20 14:30	
	Analyzed:	Jan-09-20 23:06		Jan-10-20 01:26		Jan-10-20 02:02		Jan-10-20 02:36		Jan-10-20 03:12		Jan-10-20 03:45	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Diesel Range Organics (DRO)		<7.41	24.8	<7.50	25.1	<7.54	25.2	<7.48	25.0	<7.44	24.9	<7.47	25.0
Oil Range Hydrocarbons (ORO)		<7.41	24.8	<7.50	25.1	<7.54	25.2	<7.48	25.0	<7.44	24.9	<7.47	25.0
TPH GRO by EPA 8015 Mod.	*Extracted:*	Jan-09-20 13:00		Jan-09-20 13:00		Jan-09-20 13:00		Jan-09-20 13:00		Jan-09-20 13:00		Jan-09-20 13:00	
	Analyzed:	Jan-09-20 21:55		Jan-10-20 00:20		Jan-10-20 00:44		Jan-10-20 01:08		Jan-10-20 01:32		Jan-10-20 01:57	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
TPH-GRO		<0.268	3.96	<0.263	3.88	<0.252	3.72	<0.267	3.94	<0.267	3.94	<0.268	3.96

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

Version: 1.%

Jessica Kramer

Jessica Kramer
Project Assistant

Analytical Report 648316

for

Terracon-Lubbock

Project Manager: Joseph Guesnier

Rock Daisy Road

AR197270

15-JAN-20

Collected By: Client

6701 Aberdeen, Suite 9 Lubbock, TX 79424

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

15-JAN-20

Project Manager: **Joseph Guesnier**
Terracon-Lubbock
5827 50th st, Suite 1
Lubbock, TX 79424

Reference: XENCO Report No(s): **648316**
Rock Daisy Road
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) 648316. 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. 648316 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 Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

Sample Cross Reference 648316

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
NW-1-1 (1.5-2)	S	01-06-20 14:45	1.5 - 2	648316-001
NW-3-1 (1.5-2)	S	01-06-20 14:50	1.5 - 2	648316-002
FS-1 (3.5-4)	S	01-06-20 14:55	3.5 - 4	648316-003
FS-2 (3.5-4)	S	01-06-20 15:00	3.5 - 4	648316-004
FS-3 (3.5-4)	S	01-06-20 15:05	3.5 - 4	648316-005
FS-4 (3.5-4)	S	01-06-20 15:10	3.5 - 4	648316-006

Version: 1.%

CASE NARRATIVE

Client Name: Terracon-Lubbock
Project Name: Rock Daisy Road

Project ID:	*AR197270*	Report Date:	*15-JAN-20*
Work Order Number(s):	*648316*	Date Received:	*01/08/2020*

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-3112869 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3112870 TPH GRO by EPA 8015 Mod.
Surrogate 4-Bromofluorobenzene recovered below QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 648316-003,648316-006,648316-001.

Batch: LBA-3113024 DRO-ORO By SW8015B
Lab Sample ID 648316-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD).
Diesel Range Organics (DRO) Relative Percent Difference (RPD) between matrix spike and duplicate was above quality control limits.
Samples in the analytical batch are: 648316-001, -002, -003, -004, -005, -006

Outlier/s are due to possible matrix interference.

Certificate of Analytical Results 648316

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id: **NW-1-1 (1.5-2)**
Lab Sample Id: 648316-001
Matrix: Soil
Date Collected: 01.06.20 14.45
Date Received: 01.08.20 09.30
Sample Depth: 1.5 - 2

Analytical Method: Chloride by EPA 300
Tech: JYM
Analyst: JYM
Seq Number: 3113060
Date Prep: 01.13.20 14.10
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	**2790**	9.98	0.353	mg/kg	01.13.20 14.27		1

Analytical Method: DRO-ORO By SW8015B
Tech: MIT
Analyst: MIT
Seq Number: 3113024
Date Prep: 01.09.20 14.30
Prep Method: SW8015P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.41	24.8	7.41	mg/kg	01.09.20 23.06	UF	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.41	24.8	7.41	mg/kg	01.09.20 23.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	95	%	65-144	01.09.20 23.06	
n-Triacontane	638-68-6	117	%	46-152	01.09.20 23.06	

Analytical Method: BTEX by EPA 8021B
Tech: MIT
Analyst: MIT
Seq Number: 3112869
Date Prep: 01.09.20 13.00
Prep Method: SW5030B
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00895	0.0198	0.00895	mg/kg	01.09.20 21.55	U	1
Toluene	108-88-3	<0.00463	0.0198	0.00463	mg/kg	01.09.20 21.55	U	1
Ethylbenzene	100-41-4	<0.00610	0.0198	0.00610	mg/kg	01.09.20 21.55	U	1
m,p-Xylenes	179601-23-1	<0.00675	0.0396	0.00675	mg/kg	01.09.20 21.55	U	1
o-Xylene	95-47-6	<0.00675	0.0198	0.00675	mg/kg	01.09.20 21.55	U	1
Total Xylenes	1330-20-7	<0.00675	0.0198	0.00675	mg/kg	01.09.20 21.55	U	1
Total BTEX		<0.00463	0.0198	0.00463	mg/kg	01.09.20 21.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	83	%	68-120	01.09.20 21.55	
a,a,a-Trifluorotoluene	98-08-8	95	%	71-121	01.09.20 21.55	

Certificate of Analytical Results 648316

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id:	**NW-1-1 (1.5-2)**	Matrix:	Soil	Date Received:	01.08.20 09.30
Lab Sample Id:	648316-001	Date Collected:	01.06.20 14.45	Sample Depth:	1.5 - 2

Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	01.09.20 13.00	Basis:	Wet Weight
Seq Number:	3112870				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.268	3.96	0.268	mg/kg	01.09.20 21.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	75	%	76-123	01.09.20 21.55	**
a,a,a-Trifluorotoluene	98-08-8	80	%	69-120	01.09.20 21.55	

Certificate of Analytical Results 648316

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id: **NW-3-1 (1.5-2)** Matrix: Soil Date Received:01.08.20 09.30
Lab Sample Id: 648316-002 Date Collected: 01.06.20 14.50 Sample Depth: 1.5 - 2

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: JYM % Moisture:
Analyst: JYM Date Prep: 01.13.20 14.10 Basis: Wet Weight
Seq Number: 3113060 SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**46.0**	10.0	0.354	mg/kg	01.13.20 14.36		1

Analytical Method: DRO-ORO By SW8015B Prep Method: SW8015P
Tech: MIT % Moisture:
Analyst: MIT Date Prep: 01.09.20 14.30 Basis: Wet Weight
Seq Number: 3113024

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.50	25.1	7.50	mg/kg	01.10.20 01.26	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.50	25.1	7.50	mg/kg	01.10.20 01.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	97	%	65-144	01.10.20 01.26	
n-Triacontane	638-68-6	122	%	46-152	01.10.20 01.26	

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
Tech: MIT % Moisture:
Analyst: MIT Date Prep: 01.09.20 13.00 Basis: Wet Weight
Seq Number: 3112869

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00876	0.0194	0.00876	mg/kg	01.10.20 00.20	U	1
Toluene	108-88-3	<0.00453	0.0194	0.00453	mg/kg	01.10.20 00.20	U	1
Ethylbenzene	100-41-4	<0.00597	0.0194	0.00597	mg/kg	01.10.20 00.20	U	1
m,p-Xylenes	179601-23-1	<0.00661	0.0388	0.00661	mg/kg	01.10.20 00.20	U	1
o-Xylene	95-47-6	<0.00661	0.0194	0.00661	mg/kg	01.10.20 00.20	U	1
Total Xylenes	1330-20-7	<0.00661	0.0194	0.00661	mg/kg	01.10.20 00.20	U	1
Total BTEX		<0.00453	0.0194	0.00453	mg/kg	01.10.20 00.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	92	%	68-120	01.10.20 00.20	
a,a,a-Trifluorotoluene	98-08-8	101	%	71-121	01.10.20 00.20	

Certificate of Analytical Results 648316

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id:	**NW-3-1 (1.5-2)**	Matrix:	Soil	Date Received:	01.08.20 09.30
Lab Sample Id:	648316-002	Date Collected:	01.06.20 14.50	Sample Depth:	1.5 - 2
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	01.09.20 13.00	Basis:	Wet Weight
Seq Number:	3112870				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.263	3.88	0.263	mg/kg	01.10.20 00.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	84	%	76-123	01.10.20 00.20	
a,a,a-Trifluorotoluene	98-08-8	84	%	69-120	01.10.20 00.20	

Certificate of Analytical Results 648316

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id:	**FS-1 (3.5-4)**	Matrix:	Soil	Date Received:	01.08.20 09.30
Lab Sample Id:	648316-003	Date Collected:	01.06.20 14.55	Sample Depth:	3.5 - 4

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	01.13.20 14.10	Basis:	Wet Weight
Seq Number:	3113060			SUB: T104704215-19-30	

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**99.1**	10.0	0.355	mg/kg	01.13.20 15.04		1

Analytical Method:	DRO-ORO By SW8015B			Prep Method:	SW8015P
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	01.09.20 14.30	Basis:	Wet Weight
Seq Number:	3113024				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.54	25.2	7.54	mg/kg	01.10.20 02.02	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.54	25.2	7.54	mg/kg	01.10.20 02.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	101	%	65-144	01.10.20 02.02	
n-Triacontane	638-68-6	130	%	46-152	01.10.20 02.02	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	01.09.20 13.00	Basis:	Wet Weight
Seq Number:	3112869				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00842	0.0186	0.00842	mg/kg	01.10.20 00.44	U	1
Toluene	108-88-3	<0.00436	0.0186	0.00436	mg/kg	01.10.20 00.44	U	1
Ethylbenzene	100-41-4	<0.00574	0.0186	0.00574	mg/kg	01.10.20 00.44	U	1
m,p-Xylenes	179601-23-1	<0.00635	0.0372	0.00635	mg/kg	01.10.20 00.44	U	1
o-Xylene	95-47-6	<0.00635	0.0186	0.00635	mg/kg	01.10.20 00.44	U	1
Total Xylenes	1330-20-7	<0.00635	0.0186	0.00635	mg/kg	01.10.20 00.44	U	1
Total BTEX		<0.00436	0.0186	0.00436	mg/kg	01.10.20 00.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	83	%	68-120	01.10.20 00.44	
a,a,a-Trifluorotoluene	98-08-8	95	%	71-121	01.10.20 00.44	

Certificate of Analytical Results 648316

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id: **FS-1 (3.5-4)**
Lab Sample Id: 648316-003

Matrix: Soil
Date Collected: 01.06.20 14.55

Date Received: 01.08.20 09.30
Sample Depth: 3.5 - 4

Analytical Method: TPH GRO by EPA 8015 Mod.
Tech: MIT
Analyst: MIT
Seq Number: 3112870

Date Prep: 01.09.20 13.00

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.252	3.72	0.252	mg/kg	01.10.20 00.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	75	%	76-123	01.10.20 00.44	**
a,a,a-Trifluorotoluene	98-08-8	79	%	69-120	01.10.20 00.44	

Certificate of Analytical Results 648316

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id: **FS-2 (3.5-4)** Matrix: Soil Date Received:01.08.20 09.30
Lab Sample Id: 648316-004 Date Collected: 01.06.20 15.00 Sample Depth: 3.5 - 4

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: JYM % Moisture:
Analyst: JYM Date Prep: 01.13.20 14.10 Basis: Wet Weight
Seq Number: 3113060 SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**87.0**	9.84	0.348	mg/kg	01.13.20 15.31		1

Analytical Method: DRO-ORO By SW8015B Prep Method: SW8015P
Tech: MIT % Moisture:
Analyst: MIT Date Prep: 01.09.20 14.30 Basis: Wet Weight
Seq Number: 3113024

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.48	25.0	7.48	mg/kg	01.10.20 02.36	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.48	25.0	7.48	mg/kg	01.10.20 02.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	102	%	65-144	01.10.20 02.36	
n-Triacontane	638-68-6	130	%	46-152	01.10.20 02.36	

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
Tech: MIT % Moisture:
Analyst: MIT Date Prep: 01.09.20 13.00 Basis: Wet Weight
Seq Number: 3112869

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00892	0.0197	0.00892	mg/kg	01.10.20 01.08	U	1
Toluene	108-88-3	<0.00462	0.0197	0.00462	mg/kg	01.10.20 01.08	U	1
Ethylbenzene	100-41-4	<0.00607	0.0197	0.00607	mg/kg	01.10.20 01.08	U	1
m,p-Xylenes	179601-23-1	<0.00673	0.0394	0.00673	mg/kg	01.10.20 01.08	U	1
o-Xylene	95-47-6	<0.00673	0.0197	0.00673	mg/kg	01.10.20 01.08	U	1
Total Xylenes	1330-20-7	<0.00673	0.0197	0.00673	mg/kg	01.10.20 01.08	U	1
Total BTEX		<0.00462	0.0197	0.00462	mg/kg	01.10.20 01.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	68-120	01.10.20 01.08	
a,a,a-Trifluorotoluene	98-08-8	116	%	71-121	01.10.20 01.08	

Certificate of Analytical Results 648316

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id:	**FS-2 (3.5-4)**	Matrix:	Soil	Date Received:	01.08.20 09.30
Lab Sample Id:	648316-004	Date Collected:	01.06.20 15.00	Sample Depth:	3.5 - 4

Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	01.09.20 13.00	Basis:	Wet Weight
Seq Number:	3112870				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.267	3.94	0.267	mg/kg	01.10.20 01.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	91	%	76-123	01.10.20 01.08	
a,a,a-Trifluorotoluene	98-08-8	97	%	69-120	01.10.20 01.08	

Certificate of Analytical Results 648316

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id: **FS-3 (3.5-4)** | Matrix: Soil | Date Received: 01.08.20 09.30
Lab Sample Id: 648316-005 | Date Collected: 01.06.20 15.05 | Sample Depth: 3.5 - 4

Analytical Method: Chloride by EPA 300 | Prep Method: E300P
Tech: JYM | % Moisture:
Analyst: JYM | Date Prep: 01.13.20 14.10 | Basis: Wet Weight
Seq Number: 3113060 | SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**32.3**	10.1	0.356	mg/kg	01.13.20 15.41		1

Analytical Method: DRO-ORO By SW8015B | Prep Method: SW8015P
Tech: MIT | % Moisture:
Analyst: MIT | Date Prep: 01.09.20 14.30 | Basis: Wet Weight
Seq Number: 3113024

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.44	24.9	7.44	mg/kg	01.10.20 03.12	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.44	24.9	7.44	mg/kg	01.10.20 03.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	95	%	65-144	01.10.20 03.12	
n-Triacontane	638-68-6	124	%	46-152	01.10.20 03.12	

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Tech: MIT | % Moisture:
Analyst: MIT | Date Prep: 01.09.20 13.00 | Basis: Wet Weight
Seq Number: 3112869

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00892	0.0197	0.00892	mg/kg	01.10.20 01.32	U	1
Toluene	108-88-3	<0.00462	0.0197	0.00462	mg/kg	01.10.20 01.32	U	1
Ethylbenzene	100-41-4	<0.00607	0.0197	0.00607	mg/kg	01.10.20 01.32	U	1
m,p-Xylenes	179601-23-1	<0.00673	0.0394	0.00673	mg/kg	01.10.20 01.32	U	1
o-Xylene	95-47-6	<0.00673	0.0197	0.00673	mg/kg	01.10.20 01.32	U	1
Total Xylenes	1330-20-7	<0.00673	0.0197	0.00673	mg/kg	01.10.20 01.32	U	1
Total BTEX		<0.00462	0.0197	0.00462	mg/kg	01.10.20 01.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	84	%	68-120	01.10.20 01.32	
a,a,a-Trifluorotoluene	98-08-8	93	%	71-121	01.10.20 01.32	

Certificate of Analytical Results 648316

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id:	**FS-3 (3.5-4)**	Matrix:	Soil	Date Received:	01.08.20 09.30
Lab Sample Id:	648316-005	Date Collected:	01.06.20 15.05	Sample Depth:	3.5 - 4

Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	01.09.20 13.00	Basis:	Wet Weight
Seq Number:	3112870				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.267	3.94	0.267	mg/kg	01.10.20 01.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	76	%	76-123	01.10.20 01.32	
a,a,a-Trifluorotoluene	98-08-8	77	%	69-120	01.10.20 01.32	

Certificate of Analytical Results 648316

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id:	**FS-4 (3.5-4)**	Matrix:	Soil	Date Received:	01.08.20 09.30
Lab Sample Id:	648316-006	Date Collected:	01.06.20 15.10	Sample Depth:	3.5 - 4

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Tech: JYM — % Moisture:
Analyst: JYM — Date Prep: 01.13.20 14.10 — Basis: Wet Weight
Seq Number: 3113060 — SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**72.0**	10.1	0.357	mg/kg	01.13.20 16.08		1

Analytical Method: DRO-ORO By SW8015B — Prep Method: SW8015P
Tech: MIT — % Moisture:
Analyst: MIT — Date Prep: 01.09.20 14.30 — Basis: Wet Weight
Seq Number: 3113024

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.47	25.0	7.47	mg/kg	01.10.20 03.45	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.47	25.0	7.47	mg/kg	01.10.20 03.45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	106	%	65-144	01.10.20 03.45	
n-Triacontane	638-68-6	132	%	46-152	01.10.20 03.45	

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Tech: MIT — % Moisture:
Analyst: MIT — Date Prep: 01.09.20 13.00 — Basis: Wet Weight
Seq Number: 3112869

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00895	0.0198	0.00895	mg/kg	01.10.20 01.57	U	1
Toluene	108-88-3	<0.00463	0.0198	0.00463	mg/kg	01.10.20 01.57	U	1
Ethylbenzene	100-41-4	<0.00610	0.0198	0.00610	mg/kg	01.10.20 01.57	U	1
m,p-Xylenes	179601-23-1	<0.00675	0.0396	0.00675	mg/kg	01.10.20 01.57	U	1
o-Xylene	95-47-6	<0.00675	0.0198	0.00675	mg/kg	01.10.20 01.57	U	1
Total Xylenes	1330-20-7	<0.00675	0.0198	0.00675	mg/kg	01.10.20 01.57	U	1
Total BTEX		<0.00463	0.0198	0.00463	mg/kg	01.10.20 01.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	79	%	68-120	01.10.20 01.57	
a,a,a-Trifluorotoluene	98-08-8	88	%	71-121	01.10.20 01.57	

Certificate of Analytical Results 648316

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id:	**FS-4 (3.5-4)**	Matrix:	Soil	Date Received:	01.08.20 09.30
Lab Sample Id:	648316-006	Date Collected:	01.06.20 15.10	Sample Depth:	3.5 - 4

Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	01.09.20 13.00	Basis:	Wet Weight
Seq Number:	3112870				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.268	3.96	0.268	mg/kg	01.10.20 01.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	72	%	76-123	01.10.20 01.57	**
a,a,a-Trifluorotoluene	98-08-8	74	%	69-120	01.10.20 01.57	

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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.

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 648316

Terracon-Lubbock

Rock Daisy Road

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Seq Number: 3113060 Matrix: Solid Date Prep: 01.13.20
MB Sample Id: 7694212-1-BLK LCS Sample Id: 7694212-1-BKS LCSD Sample Id: 7694212-1-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	101	101	101	101	80-120	0	20	mg/kg	01.13.20 12:55	

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Seq Number: 3113060 Matrix: Soil Date Prep: 01.13.20
Parent Sample Id: 648316-002 MS Sample Id: 648316-002 S MSD Sample Id: 648316-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	46.0	99.8	135	89	135	89	80-120	0	20	mg/kg	01.13.20 14:45	

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Seq Number: 3113060 Matrix: Soil Date Prep: 01.13.20
Parent Sample Id: 648316-003 MS Sample Id: 648316-003 S MSD Sample Id: 648316-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	99.1	100	188	89	188	89	80-120	0	20	mg/kg	01.13.20 15:13	

Analytical Method: DRO-ORO By SW8015B Prep Method: SW8015P
Seq Number: 3113024 Matrix: Solid Date Prep: 01.09.20
MB Sample Id: 7694143-1-BLK LCS Sample Id: 7694143-1-BKS LCSD Sample Id: 7694143-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Diesel Range Organics (DRO)	<7.48	100	86.8	87	78.2	78	63-139	10	20	mg/kg	01.09.20 19:59	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
Tricosane	100		93		98		65-144	%	01.09.20 19:59
n-Triacontane	118		111		115		46-152	%	01.09.20 19:59

Analytical Method: DRO-ORO By SW8015B Prep Method: SW8015P
Seq Number: 3113024 Matrix: Solid Date Prep: 01.09.20
MB Sample Id: 7694143-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Oil Range Hydrocarbons (ORO)	<7.48	mg/kg	01.09.20 22:31	

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	

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QC Summary 648316

Terracon-Lubbock

Rock Daisy Road

Analytical Method: DRO-ORO By SW8015B Prep Method: SW8015P
Seq Number: 3113024 Matrix: Soil Date Prep: 01.09.20
Parent Sample Id: 648316-001 MS Sample Id: 648316-001 S MSD Sample Id: 648316-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Diesel Range Organics (DRO)	<7.52	101	86.2	85	119	120	63-139	32	20	mg/kg	01.09.20 23:41	F

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
Tricosane	97		108		65-144	%	01.09.20 23:41
n-Triacontane	118		123		46-152	%	01.09.20 23:41

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
Seq Number: 3112869 Matrix: Solid Date Prep: 01.09.20
MB Sample Id: 7694101-1-BLK LCS Sample Id: 7694101-1-BKS LCSD Sample Id: 7694101-1-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	1.77	89	1.80	90	55-120	2	20	mg/kg	01.09.20 19:05	
Toluene	<0.00468	2.00	1.85	93	1.86	93	77-120	1	20	mg/kg	01.09.20 19:05	
Ethylbenzene	<0.00616	2.00	1.95	98	1.98	99	77-120	2	20	mg/kg	01.09.20 19:05	
m,p-Xylenes	<0.00682	4.00	3.91	98	3.97	99	78-120	2	20	mg/kg	01.09.20 19:05	
o-Xylene	<0.00682	2.00	1.97	99	2.01	101	78-120	2	20	mg/kg	01.09.20 19:05	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	99		103		106		68-120	%	01.09.20 19:05
a,a,a-Trifluorotoluene	110		111		112		71-121	%	01.09.20 19:05

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
Seq Number: 3112869 Matrix: Soil Date Prep: 01.09.20
Parent Sample Id: 648316-001 MS Sample Id: 648316-001 S MSD Sample Id: 648316-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00809	1.79	1.51	84	1.66	87	54-120	9	25	mg/kg	01.09.20 22:19	
Toluene	<0.00419	1.79	1.61	90	1.72	91	57-120	7	25	mg/kg	01.09.20 22:19	
Ethylbenzene	<0.00551	1.79	1.72	96	1.75	92	58-131	2	25	mg/kg	01.09.20 22:19	
m,p-Xylenes	<0.00610	3.58	3.44	96	3.47	91	62-124	1	25	mg/kg	01.09.20 22:19	
o-Xylene	<0.00610	1.79	1.69	94	1.75	92	62-124	3	25	mg/kg	01.09.20 22:19	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	84		92		68-120	%	01.09.20 22:19
a,a,a-Trifluorotoluene	93		115		71-121	%	01.09.20 22:19

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 648316

Terracon-Lubbock

Rock Daisy Road

Analytical Method: TPH GRO by EPA 8015 Mod. Prep Method: SW5030B

Seq Number: 3112870 Matrix: Solid Date Prep: 01.09.20

MB Sample Id: 7694103-1-BLK LCS Sample Id: 7694103-1-BKS LCSD Sample Id: 7694103-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-GRO	<0.271	20.0	20.1	101	19.8	99	35-129	2	20	mg/kg	01.09.20 19:54	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	89		117		133	**	76-123	%	01.09.20 19:54
a,a,a-Trifluorotoluene	91		81		97		69-120	%	01.09.20 19:54

Analytical Method: TPH GRO by EPA 8015 Mod. Prep Method: SW5030B

Seq Number: 3112870 Matrix: Soil Date Prep: 01.09.20

Parent Sample Id: 648316-001 MS Sample Id: 648316-001 S MSD Sample Id: 648316-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-GRO	<0.267	19.7	19.0	96	19.2	98	35-129	1	20	mg/kg	01.09.20 23:07	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	115		114		76-123	%	01.09.20 23:07
a,a,a-Trifluorotoluene	90		84		69-120	%	01.09.20 23:07

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	

648316

CHAIN OF CUSTODY RECORD

Terracon

Office Location: Lubbock

Project Manager: Joseph Guesnier

Sampler's Name: Bryant McBrayer

Laboratory: Xenco

Address: 6701 Aberdeen, Lubbock, Texas 79424

Phone:

Contact: Joseph Guesnier (806-544-9276)

SRS #:

Sampler's Signature

LAB USE ONLY

DUE DATE: 1.3/1.3

TEMP OF COOLER WHEN RECEIVED (°C)

Page 1 of 1

Project Number: AR197270

Project Name: Rock Daisy Road

ANALYSIS REQUESTED

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	2 oz Glass	4 oz Glass	5035 kit	40 ml VOA	Chloride (EPA Method 300)	TPH Extended 8015	BTEX (EPA Method 8021B)	Hold				Lab Sample ID
S	1/06/2020	14:45	X		NW-1.1 (1.5-2)	1.5	2		X			X	X	X					648316 1
S	1/06/2020	14:50	X		Nw-3.1 (1.5-2)	1.5	2		X			X	X	X					2
S	1/06/2020	14:55	X		FS-1 (3.5-4)	1.5	2		X			X	X	X					3
S	1/06/2020	15:00	X		FS-2 (3.5-4)	1.5	2		X			X	X	X					4
S	1/06/2020	15:05	X		FS-3 (3.5-4)	1.5	2		X			X	X	X					5
S	1/06/2020	15:10	X		FS-4 (3.5-4)	1.5	2		X			X	X	X					6
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TURNAROUND TIME: ☒ Normal X ☐ 48-Hour Rush ☐ 24-Hour Rush

TRRP Laboratory Review Checklist ☐ Yes ☐ No

Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
[signature]	1/8/2020	9:30	Brenda Ward		
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

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 1 L; 250 ml = Glass wide mouth; P/O - Plastic or other ______

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

Responsive ■ Resourceful ■ Reliable

Inter-Office Shipment

IOS Number : 55597

Date/Time: 01.08.2020
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.: 774430045683
E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
648316-001	S	NW-1-1 (1.5-2)	01.06.2020 14:45	E300_CL	Chloride by EPA 300	01.14.2020	**01.08.2020 14:45**	JKR	CL	
648316-002	S	NW-3-1 (1.5-2)	01.06.2020 14:50	E300_CL	Chloride by EPA 300	01.14.2020	**01.08.2020 14:50**	JKR	CL	
648316-003	S	FS-1 (3.5-4)	01.06.2020 14:55	E300_CL	Chloride by EPA 300	01.14.2020	**01.08.2020 14:55**	JKR	CL	
648316-004	S	FS-2 (3.5-4)	01.06.2020 15:00	E300_CL	Chloride by EPA 300	01.14.2020	**01.08.2020 15:00**	JKR	CL	
648316-005	S	FS-3 (3.5-4)	01.06.2020 15:05	E300_CL	Chloride by EPA 300	01.14.2020	**01.08.2020 15:05**	JKR	CL	
648316-006	S	FS-4 (3.5-4)	01.06.2020 15:10	E300_CL	Chloride by EPA 300	01.14.2020	**01.08.2020 15:10**	JKR	CL	

Inter Office Shipment or Sample Comments:

Relinquished By: Brenda Ward
Brenda Ward

Date Relinquished: 01.08.2020

Received By: Abdhija Saidurga
Abdhija Saidurga

Date Received: 01.09.2020

Cooler Temperature: 2.7

 Final 1.000

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 55597

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used : HOU-068

Sent By: Brenda Ward **Date Sent:** 01.08.2020 02.01 PM

Received By: Abdhija Saidurga **Date Received:** 01.09.2020 03.06 PM

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	2.7	
#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: Abdhija Saidurga Date: 01.09.2020

Abdhija Saidurga

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Terracon-Lubbock

Date/ Time Received: 01.08.2020 09.30.00 AM

Work Order #: 648316

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)?	1.3	
#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**	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
Brenda Ward
Date: 01.08.2020

Checklist reviewed by: Jessica Kramer
Jessica Kramer
Date: 01.10.2020

XENCO LABORATORIES

Certificate of Analysis Summary 650662

Terracon-Lubbock, Lubbock, TX

Project Name: Rock Daisy Road

Project Id: AR197270
Contact: Joseph Guesnier
Project Location:

Date Received in Lab: Wed Jan-29-20 10:38 am
Report Date: 30-JAN-20
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	650662-001		650662-002		650662-003		650662-004		650662-005		650662-006	
	Field Id:	WW-1.0 (0-0.5)		CS-5.1 (0-0.5)		CS-6.1 (0-0.5)		NW-1.1 (0-0.5)		CS-1.2 (2-2.5)		CS-2.2 (2-2.5)	
	Depth:	0-0.5 ft		0-0.5 ft		0-0.5 ft		0-0.5 ft		2-2.5 ft		2-2.5 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-28-20 11:00		Jan-28-20 11:05		Jan-28-20 11:10		Jan-28-20 11:15		Jan-28-20 11:20		Jan-28-20 11:25	
Chloride by EPA 300	***Extracted:***	Jan-29-20 14:00		Jan-29-20 14:00		Jan-29-20 14:00		Jan-29-20 14:00		Jan-29-20 14:00		Jan-29-20 13:00	
	Analyzed:	Jan-29-20 23:00		Jan-29-20 23:50		Jan-30-20 00:03		Jan-30-20 00:15		Jan-30-20 00:40		Jan-29-20 20:31	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		2220 DX	125	73.0	25.0	45.9	25.0	643	125	40.4	25.0	24.1 J	25.0

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

Version: 1.%

Jessica Kramer

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 650662

Terracon-Lubbock, Lubbock, TX

Project Name: Rock Daisy Road

Project Id: AR197270
Contact: Joseph Guesnier
Project Location:

Date Received in Lab: Wed Jan-29-20 10:38 am
Report Date: 30-JAN-20
Project Manager: Jessica Kramer

Analysis Requested										
	Lab Id:	650662-007		650662-008						
	Field Id:	CS-11.1 (2.5-3)		CS-12.1 (2.5-3)						
	Depth:	2.5-3 ft		2.5-3 ft						
	Matrix:	SOIL		SOIL						
	Sampled:	Jan-28-20 11:30		Jan-28-20 11:35						
Chloride by EPA 300	***Extracted:***	Jan-29-20 14:00		Jan-29-20 14:00						
	Analyzed:	Jan-30-20 00:52		Jan-30-20 01:05						
	Units/RL:	mg/kg	RL	mg/kg	RL					
Chloride		33.5	25.0	29.7	25.0					

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

Version: 1.%

Jessica Kramer

Jessica Kramer
Project Assistant

Analytical Report 650662

for

Terracon-Lubbock

Project Manager: Joseph Guesnier

Rock Daisy Road

AR197270

30-JAN-20

Collected By: Client

6701 Aberdeen, Suite 9 Lubbock, TX 79424

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

30-JAN-20

Project Manager: **Joseph Guesnier**
Terracon-Lubbock
5827 50th st, Suite 1
Lubbock, TX 79424

Reference: XENCO Report No(s): **650662**
Rock Daisy Road
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 XENCO Report Number(s) 650662. 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. 650662 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 Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

Sample Cross Reference 650662

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
WW-1.0 (0-0.5)	S	01-28-20 11:00	0 - 0.5 ft	650662-001
CS-5.1 (0-0.5)	S	01-28-20 11:05	0 - 0.5 ft	650662-002
CS-6.1 (0-0.5)	S	01-28-20 11:10	0 - 0.5 ft	650662-003
NW-1.1 (0-0.5)	S	01-28-20 11:15	0 - 0.5 ft	650662-004
CS-1.2 (2-2.5)	S	01-28-20 11:20	2 - 2.5 ft	650662-005
CS-2.2 (2-2.5)	S	01-28-20 11:25	2 - 2.5 ft	650662-006
CS-11.1 (2.5-3)	S	01-28-20 11:30	2.5 - 3 ft	650662-007
CS-12.1 (2.5-3)	S	01-28-20 11:35	2.5 - 3 ft	650662-008

Version: 1.%

CASE NARRATIVE

Client Name: Terracon-Lubbock
Project Name: Rock Daisy Road

Project ID: *AR197270*
Work Order Number(s): *650662*

Report Date: *30-JAN-20*
Date Received: *01/29/2020*

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-3115024 Chloride by EPA 300

Lab Sample ID 650662-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 650662-001, -002, -003, -004, -005, -007, -008.

The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Certificate of Analytical Results 650662

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id:	**WW-1.0 (0-0.5)**	Matrix:	Soil	Date Received:	01.29.20 10.38
Lab Sample Id:	650662-001	Date Collected:	01.28.20 11.00	Sample Depth:	0 - 0.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	RNL			% Moisture:	
Analyst:	RNL	Date Prep:	01.29.20 14.00	Basis:	Wet Weight
Seq Number:	3115024				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2220**	125	2.86	mg/kg	01.29.20 23.13	DX	5

Certificate of Analytical Results 650662

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id: **CS-5.1 (0-0.5)**
Lab Sample Id: 650662-002

Matrix: Soil
Date Collected: 01.28.20 11.05

Date Received: 01.29.20 10.38
Sample Depth: 0 - 0.5 ft

Analytical Method: Chloride by EPA 300
Tech: RNL
Analyst: RNL
Seq Number: 3115024

Date Prep: 01.29.20 14.00

Prep Method: E300P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**73.0**	25.0	0.572	mg/kg	01.29.20 23.50		1

Certificate of Analytical Results 650662

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id: **CS-6.1 (0-0.5)**
Lab Sample Id: 650662-003

Matrix: Soil
Date Collected: 01.28.20 11.10

Date Received: 01.29.20 10.38
Sample Depth: 0 - 0.5 ft

Analytical Method: Chloride by EPA 300
Tech: RNL
Analyst: RNL
Seq Number: 3115024

Date Prep: 01.29.20 14.00

Prep Method: E300P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**45.9**	25.0	0.572	mg/kg	01.30.20 00.03		1

Certificate of Analytical Results 650662

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id: **NW-1.1 (0-0.5)**
Lab Sample Id: 650662-004

Matrix: Soil
Date Collected: 01.28.20 11.15

Date Received: 01.29.20 10.38
Sample Depth: 0 - 0.5 ft

Analytical Method: Chloride by EPA 300
Tech: RNL
Analyst: RNL
Seq Number: 3115024

Date Prep: 01.29.20 14.00

Prep Method: E300P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**643**	125	2.86	mg/kg	01.30.20 00.15		5

Certificate of Analytical Results 650662

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id: **CS-1.2 (2-2.5)**
Lab Sample Id: 650662-005

Matrix: Soil
Date Collected: 01.28.20 11.20

Date Received: 01.29.20 10.38
Sample Depth: 2 - 2.5 ft

Analytical Method: Chloride by EPA 300
Tech: RNL
Analyst: RNL
Seq Number: 3115024

Date Prep: 01.29.20 14.00

Prep Method: E300P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**40.4**	25.0	0.572	mg/kg	01.30.20 00.40		1

Certificate of Analytical Results 650662

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id: **CS-2.2 (2-2.5)**
Matrix: Soil
Date Received: 01.29.20 10.38
Lab Sample Id: 650662-006
Date Collected: 01.28.20 11.25
Sample Depth: 2 - 2.5 ft

Analytical Method: Chloride by EPA 300
Prep Method: E300P
Tech: RNL
% Moisture:
Analyst: RNL
Date Prep: 01.29.20 13.00
Basis: Wet Weight
Seq Number: 3114968

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**24.1**	25.0	0.572	mg/kg	01.29.20 20.31	J	1

Certificate of Analytical Results 650662

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id:	**CS-11.1 (2.5-3)**	Matrix:	Soil	Date Received:	01.29.20 10.38
Lab Sample Id:	650662-007	Date Collected:	01.28.20 11.30	Sample Depth:	2.5 - 3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	RNL			% Moisture:	
Analyst:	RNL	Date Prep:	01.29.20 14.00	Basis:	Wet Weight
Seq Number:	3115024				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**33.5**	25.0	0.572	mg/kg	01.30.20 00.52		1

Certificate of Analytical Results 650662

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id:	**CS-12.1 (2.5-3)**	Matrix:	Soil	Date Received:	01.29.20 10.38
Lab Sample Id:	650662-008	Date Collected:	01.28.20 11.35	Sample Depth:	2.5 - 3 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	RNL			% Moisture:	
Analyst:	RNL	Date Prep:	01.29.20 14.00	Basis:	Wet Weight
Seq Number:	3115024				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**29.7**	25.0	0.572	mg/kg	01.30.20 01.05		1

XENCO LABORATORIES

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.

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

XENCO LABORATORIES

QC Summary 650662

Terracon-Lubbock
Rock Daisy Road

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Seq Number: 3114968 Matrix: Solid Date Prep: 01.29.20
MB Sample Id: 7695560-1-BLK LCS Sample Id: 7695560-1-BKS LCSD Sample Id: 7695560-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.572	250	241	96	241	96	90-110	0	20	mg/kg	01.29.20 16:10	

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Seq Number: 3115024 Matrix: Solid Date Prep: 01.29.20
MB Sample Id: 7695592-1-BLK LCS Sample Id: 7695592-1-BKS LCSD Sample Id: 7695592-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.572	250	255	102	251	100	90-110	2	20	mg/kg	01.29.20 22:36	

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Seq Number: 3114968 Matrix: Soil Date Prep: 01.29.20
Parent Sample Id: 650649-006 MS Sample Id: 650649-006 S MSD Sample Id: 650649-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1800	250	2550	300	2520	288	80-120	1	20	mg/kg	01.29.20 20:07	X

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Seq Number: 3114968 Matrix: Soil Date Prep: 01.29.20
Parent Sample Id: 650658-001 MS Sample Id: 650658-001 S MSD Sample Id: 650658-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	8.45	250	254	98	245	95	80-120	4	20	mg/kg	01.29.20 17:00	

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Seq Number: 3115024 Matrix: Soil Date Prep: 01.29.20
Parent Sample Id: 650662-001 MS Sample Id: 650662-001 S MSD Sample Id: 650662-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1780	250	2420	256	2400	248	80-120	1	20	mg/kg	01.29.20 23:25	X

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

650662

650662

CHAIN OF CUSTODY RECORD

Terracon

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

Office Location: Lubbock
Project Manager: Joseph Guesnier
Sampler's Name: Joseph Guesnier
Project Number: AR197270
Project Name: Rock Daisy Road

LAB USE ONLY
DUE DATE:
TEMP OF COOLER WHEN RECEIVED (°C) IR 3.1 / 3.2

Page 1 of 1

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	2 oz Glass	4 oz Glass	5035 kit	40 ml VOA	BTEX (EPA Method 8021B)	TPH Extended 8015	Chloride (EPA Method 300)	Hold	Lab Sample ID
S	1/28/2020	11:00		X	WW-1.0 (0-0.5)	0'	0.5'		X					X		1
S	1/28/2020	11:05		X	CS-5.1 (0-0.5)	0'	0.5'		X					X		2
S	1/28/2020	11:10		X	CS-6.1 (0-0.5)	0'	0.5'		X					X		3
S	1/28/2020	11:15		X	NW-1.1 (0-0.5)	0'	0.5'		X					X		4
S	1/28/2020	11:20		X	CS-1.2 (2-2.5)	2'	2.5'		X					X		5
S	1/28/2020	11:25		X	CS-2.2 (2-2.5)	2'	2.5'		X					X		6
S	1/28/2020	11:30		X	CS-11.1 (2.5-3)	2.5'	3'		X					X		7
S	1/28/2020	11:35		X	CS-12.1 (2.5-3)	2.5'	3'		X					X		8

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:
[signature]	1-29-2020	10:38am	[signature]	1/29/2020	10:38
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:

e-mail results to:

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

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

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Terracon-Lubbock

Date/ Time Received: 01.29.2020 10.38.00 AM

Work Order #: 650662

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)?	3.2	
#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)?	**N/A**	
#18 Water VOC samples have zero headspace?	**N/A**	

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

Analyst: PH Device/Lot#:

Checklist completed by: Brenda Ward
Brenda Ward
Date: 01.29.2020

Checklist reviewed by: Jessica Kramer
Jessica Kramer
Date: 01.30.2020

 Final 1.000

Certificate of Analysis Summary 650662

Terracon-Lubbock, Lubbock, TX

Project Name: Rock Daisy Road

Project Id: AR197270
Contact: Joseph Guesnier
Project Location:

Date Received in Lab: Wed 01.29.2020 10:38
Report Date: 02.20.2020 13:20
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	650662-001		650662-002		650662-003		650662-004		650662-005		650662-006	
	Field Id:	WW-1.0 (0-0.5)		CS-5.1 (3.5-4)		CS-6.1 (0-0.5)		NW-1.1 (0-0.5)		CS-1.2 (2-2.5)		CS-2.2 (2-2.5)	
	Depth:	0-0.5 ft		3.5-4 ft		0-0.5 ft		0-0.5 ft		2-2.5 ft		2-2.5 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	01.28.2020 11:00		01.28.2020 11:05		01.28.2020 11:10		01.28.2020 11:15		01.28.2020 11:20		01.28.2020 11:25	
Chloride by EPA 300	*Extracted:*	01.29.2020 14:00		01.29.2020 14:00		01.29.2020 14:00		01.29.2020 14:00		01.29.2020 14:00		01.29.2020 13:00	
	Analyzed:	01.29.2020 23:00		01.29.2020 23:50		01.30.2020 00:03		01.30.2020 00:15		01.30.2020 00:40		01.29.2020 20:31	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		2220 DX	125	73.0	25.0	45.9	25.0	643	125	40.4	25.0	24.1 J	25.0

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

John Builes
Project Manager

Certificate of Analysis Summary 650662

Terracon-Lubbock, Lubbock, TX

Project Name: Rock Daisy Road

Project Id: AR197270
Contact: Joseph Guesnier
Project Location:

Date Received in Lab: Wed 01.29.2020 10:38
Report Date: 02.20.2020 13:20
Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	650662-007		650662-008							
	Field Id:	CS-11.1 (2.5-3)		CS-12.1 (2.5-3)							
	Depth:	2.5-3 ft		2.5-3 ft							
	Matrix:	SOIL		SOIL							
	Sampled:	01.28.2020 11:30		01.28.2020 11:35							
Chloride by EPA 300	***Extracted:***	01.29.2020 14:00		01.29.2020 14:00							
	Analyzed:	01.30.2020 00:52		01.30.2020 01:05							
	Units/RL:	mg/kg	RL	mg/kg	RL						
Chloride		33.5	25.0	29.7	25.0						

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

John Builes
Project Manager

Analytical Report 650662

for

Terracon-Lubbock

Project Manager: Joseph Guesnier

Rock Daisy Road

AR197270

02.20.2020

Collected By: Client

6701 Aberdeen, Suite 9 Lubbock, TX 79424

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

02.20.2020

Project Manager: **Joseph Guesnier**
Terracon-Lubbock
5827 50th st, Suite 1
Lubbock, TX 79424

Reference: XENCO Report No(s): **650662**
Rock Daisy Road
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 XENCO Report Number(s) 650662. 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. 650662 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,

John Builes
Project Manager

A Small Business and Minority Company

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

Sample Cross Reference 650662

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
WW-1.0 (0-0.5)	S	01.28.2020 11:00	0 - 0.5 ft	650662-001
CS-5.1 (3.5-4)	S	01.28.2020 11:05	3.5 - 4 ft	650662-002
CS-6.1 (0-0.5)	S	01.28.2020 11:10	0 - 0.5 ft	650662-003
NW-1.1 (0-0.5)	S	01.28.2020 11:15	0 - 0.5 ft	650662-004
CS-1.2 (2-2.5)	S	01.28.2020 11:20	2 - 2.5 ft	650662-005
CS-2.2 (2-2.5)	S	01.28.2020 11:25	2 - 2.5 ft	650662-006
CS-11.1 (2.5-3)	S	01.28.2020 11:30	2.5 - 3 ft	650662-007
CS-12.1 (2.5-3)	S	01.28.2020 11:35	2.5 - 3 ft	650662-008

CASE NARRATIVE

Client Name: Terracon-Lubbock
Project Name: Rock Daisy Road

Project ID:	*AR197270*	Report Date:	*02.20.2020*
Work Order Number(s):	*650662*	Date Received:	*01.29.2020*

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:

Revised report issued to correct sample depth on sample 650662-002. JB 2/20/20

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3115024 Chloride by EPA 300

Lab Sample ID 650662-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 650662-001, -002, -003, -004, -005, -007, -008.

The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Certificate of Analytical Results 650662

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id:	**WW-1.0 (0-0.5)**	Matrix:	Soil	Date Received:	01.29.2020 10:38
Lab Sample Id:	650662-001	Date Collected:	01.28.2020 11:00	Sample Depth:	0 - 0.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	RNL			% Moisture:	
Analyst:	RNL	Date Prep:	01.29.2020 14:00	Basis:	Wet Weight
Seq Number:	3115024				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2220**	125	2.86	mg/kg	01.29.2020 23:13	DX	5

Certificate of Analytical Results 650662

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id:	**CS-5.1 (3.5-4)**	Matrix:	Soil	Date Received:	01.29.2020 10:38
Lab Sample Id:	650662-002	Date Collected:	01.28.2020 11:05	Sample Depth:	3.5 - 4 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	RNL			% Moisture:	
Analyst:	RNL	Date Prep:	01.29.2020 14:00	Basis:	Wet Weight
Seq Number:	3115024				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**73.0**	25.0	0.572	mg/kg	01.29.2020 23:50		1

Certificate of Analytical Results 650662

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id: **CS-6.1 (0-0.5)**
Lab Sample Id: 650662-003

Matrix: Soil
Date Collected: 01.28.2020 11:10

Date Received: 01.29.2020 10:38
Sample Depth: 0 - 0.5 ft

Analytical Method: Chloride by EPA 300
Tech: RNL
Analyst: RNL
Seq Number: 3115024

Date Prep: 01.29.2020 14:00

Prep Method: E300P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**45.9**	25.0	0.572	mg/kg	01.30.2020 00:03		1

Certificate of Analytical Results 650662

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id:	**NW-1.1 (0-0.5)**	Matrix:	Soil	Date Received:	01.29.2020 10:38
Lab Sample Id:	650662-004	Date Collected:	01.28.2020 11:15	Sample Depth:	0 - 0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	RNL			% Moisture:	
Analyst:	RNL	Date Prep:	01.29.2020 14:00	Basis:	Wet Weight
Seq Number:	3115024				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**643**	125	2.86	mg/kg	01.30.2020 00:15		5

Certificate of Analytical Results 650662

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id:	**CS-1.2 (2-2.5)**	Matrix:	Soil	Date Received:	01.29.2020 10:38
Lab Sample Id:	650662-005	Date Collected:	01.28.2020 11:20	Sample Depth:	2 - 2.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	RNL			% Moisture:	
Analyst:	RNL	Date Prep:	01.29.2020 14:00	Basis:	Wet Weight
Seq Number:	3115024				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**40.4**	25.0	0.572	mg/kg	01.30.2020 00:40		1

Certificate of Analytical Results 650662

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id:	**CS-2.2 (2-2.5)**	Matrix:	Soil	Date Received:	01.29.2020 10:38
Lab Sample Id:	650662-006	Date Collected:	01.28.2020 11:25	Sample Depth:	2 - 2.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	RNL			% Moisture:	
Analyst:	RNL	Date Prep:	01.29.2020 13:00	Basis:	Wet Weight
Seq Number:	3114968				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**24.1**	25.0	0.572	mg/kg	01.29.2020 20:31	J	1

Certificate of Analytical Results 650662

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id:	**CS-11.1 (2.5-3)**	Matrix:	Soil	Date Received:	01.29.2020 10:38
Lab Sample Id:	650662-007	Date Collected:	01.28.2020 11:30	Sample Depth:	2.5 - 3 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	RNL			% Moisture:	
Analyst:	RNL	Date Prep:	01.29.2020 14:00	Basis:	Wet Weight
Seq Number:	3115024				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**33.5**	25.0	0.572	mg/kg	01.30.2020 00:52		1

Certificate of Analytical Results 650662

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road

Sample Id:	**CS-12.1 (2.5-3)**	Matrix:	Soil	Date Received:	01.29.2020 10:38
Lab Sample Id:	650662-008	Date Collected:	01.28.2020 11:35	Sample Depth:	2.5 - 3 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	RNL			% Moisture:	
Analyst:	RNL	Date Prep:	01.29.2020 14:00	Basis:	Wet Weight
Seq Number:	3115024				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**29.7**	25.0	0.572	mg/kg	01.30.2020 01:05		1

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 650662

Terracon-Lubbock

Rock Daisy Road

Analytical Method: **Chloride by EPA 300** | Prep Method: E300P
Seq Number: 3114968 | Matrix: Solid | Date Prep: 01.29.2020
MB Sample Id: 7695560-1-BLK | LCS Sample Id: 7695560-1-BKS | LCSD Sample Id: 7695560-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.572	250	241	96	241	96	90-110	0	20	mg/kg	01.29.2020 16:10	

Analytical Method: **Chloride by EPA 300** | Prep Method: E300P
Seq Number: 3115024 | Matrix: Solid | Date Prep: 01.29.2020
MB Sample Id: 7695592-1-BLK | LCS Sample Id: 7695592-1-BKS | LCSD Sample Id: 7695592-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.572	250	255	102	251	100	90-110	2	20	mg/kg	01.29.2020 22:36	

Analytical Method: **Chloride by EPA 300** | Prep Method: E300P
Seq Number: 3114968 | Matrix: Soil | Date Prep: 01.29.2020
Parent Sample Id: 650649-006 | MS Sample Id: 650649-006 S | MSD Sample Id: 650649-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1800	250	2550	300	2520	288	80-120	1	20	mg/kg	01.29.2020 20:07	X

Analytical Method: **Chloride by EPA 300** | Prep Method: E300P
Seq Number: 3114968 | Matrix: Soil | Date Prep: 01.29.2020
Parent Sample Id: 650658-001 | MS Sample Id: 650658-001 S | MSD Sample Id: 650658-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	8.45	250	254	98	245	95	80-120	4	20	mg/kg	01.29.2020 17:00	

Analytical Method: **Chloride by EPA 300** | Prep Method: E300P
Seq Number: 3115024 | Matrix: Soil | Date Prep: 01.29.2020
Parent Sample Id: 650662-001 | MS Sample Id: 650662-001 S | MSD Sample Id: 650662-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1780	250	2420	256	2400	248	80-120	1	20	mg/kg	01.29.2020 23:25	X

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

650662

650662

CHAIN OF CUSTODY RECORD

Terracon

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

Office Location: Lubbock
Project Manager: Joseph Guesnier
Sampler's Name: Joseph Guesnier

Project Number: AR197270
Project Name: Rock Daisy Road

LAB USE ONLY
DUE DATE:
TEMP OF COOLER WHEN RECEIVED (°C): IR 4 3.1 / 3.2

Page 1 of 1

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	2 oz Glass	4 oz Glass	5035 kit	40 ml VOA	BTEX (EPA Method 8021B)	TPH Extended 8015	Chloride (EPA Method 300)	Hold				Lab Sample ID
S	1/28/2020	11:00		X	WW-1.0 (0-0.5)	0'	0.5'		X					X					1
S	1/28/2020	11:05		X	CS-5.1 (0-0.5)	0'	0.5'		X					X					2
S	1/28/2020	11:10		X	CS-6.1 (0-0.5)	0'	0.5'		X					X					3
S	1/28/2020	11:15		X	NW-1.1 (0-0.5)	0'	0.5'		X					X					4
S	1/28/2020	11:20		X	CS-1.2 (2-2.5)	2'	2.5'		X					X					5
S	1/28/2020	11:25		X	CS-2.2 (2-2.5)	2'	2.5'		X					X					6
S	1/28/2020	11:30		X	CS-11.1 (2.5-3)	2.5'	3'		X					X					7
S	1/28/2020	11:35		X	CS-12.1 (2.5-3)	2.5'	3'		X					X					8

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:
Relinquished by (Signature)	1-29-2020	10:36am	Received by (Signature)	1/29/2020	10:38
Relinquished by (Signature)			Received by (Signature)		
Relinquished by (Signature)			Received by (Signature)		
Relinquished by (Signature)			Received by (Signature)		

NOTES: Client:

e-mail results to:

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

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

Responsive ■ Resourceful ■ Reliable

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Terracon-Lubbock

Date/ Time Received: 01.29.2020 10.38.00 AM

Work Order #: 650662

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)?	3.2	
#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)?	**N/A**	
#18 Water VOC samples have zero headspace?	**N/A**	

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

Analyst:

PH Device/Lot#:

Checklist completed by: Brenda Ward
Brenda Ward
Date: 01.29.2020

Checklist reviewed by: Jessica Kramer
Jessica Kramer
Date: 01.30.2020

Certificate of Analysis Summary 651649

Terracon-Lubbock, Lubbock, TX

Project Name: Rock Daisy

Project Id: AR197270
Contact: Joseph Guesnier
Project Location:

Date Received in Lab: Thu Feb-06-20 05:05 pm
Report Date: 10-FEB-20
Project Manager: Jessica Kramer

Analysis Requested												
	Lab Id:	651649-001		651649-002								
	Field Id:	WW-1.1 (0-0.5)		NW-1.2 (0-0.5)								
	Depth:	0-0.5 ft		0-0.5 ft								
	Matrix:	SOIL		SOIL								
	Sampled:	Feb-04-20 11:55		Feb-04-20 11:55								
BTEX by EPA 8021B	*Extracted:*	Feb-07-20 11:15		Feb-07-20 11:15								
	Analyzed:	Feb-07-20 20:12		Feb-07-20 22:34								
	Units/RL:	mg/kg	RL	mg/kg	RL							
Benzene		<0.00796	0.0176	<0.00883	0.0195							
Toluene		<0.00412	0.0176	<0.00457	0.0195							
Ethylbenzene		<0.00542	0.0176	<0.00602	0.0195							
m,p-Xylenes		<0.00600	0.0352	<0.00666	0.0391							
o-Xylene		<0.00600	0.0176	<0.00666	0.0195							
Total Xylenes		<0.00600	0.0176	<0.00666	0.0195							
Total BTEX		<0.00412	0.0176	<0.00457	0.0195							
Chloride by EPA 300	*Extracted:*	Feb-07-20 14:00		Feb-07-20 14:00								
	Analyzed:	Feb-07-20 19:22		Feb-07-20 19:50								
	Units/RL:	mg/kg	RL	mg/kg	RL							
Chloride		285 X	25.0	374	25.0							
DRO-ORO By SW8015B	*Extracted:*	Feb-07-20 10:50		Feb-07-20 10:50								
	Analyzed:	Feb-08-20 02:47		Feb-08-20 03:22								
	Units/RL:	mg/kg	RL	mg/kg	RL							
Diesel Range Organics (DRO)		<7.47	25.0	16.0 J	25.0							
Oil Range Hydrocarbons (ORO)		<7.47	25.0	<7.47	25.0							
TPH GRO by EPA 8015 Mod.	*Extracted:*	Feb-07-20 11:15		Feb-07-20 11:15								
	Analyzed:	Feb-07-20 20:12		Feb-07-20 22:34								
	Units/RL:	mg/kg	RL	mg/kg	RL							
TPH-GRO		<0.239	3.52	<0.265	3.91							

Jessica Kramer

Jessica Kramer
Project Assistant

Analytical Report 651649

for

Terracon-Lubbock

Project Manager: Joseph Guesnier

Rock Daisy

AR197270

10-FEB-20

Collected By: Client

6701 Aberdeen, Suite 9 Lubbock, TX 79424

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

10-FEB-20

Project Manager: **Joseph Guesnier**
Terracon-Lubbock
5827 50th st, Suite 1
Lubbock, TX 79424

Reference: XENCO Report No(s): **651649**
Rock Daisy
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 XENCO Report Number(s) 651649. 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. 651649 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 Assistant

Sample Cross Reference 651649

Terracon-Lubbock, Lubbock, TX

Rock Daisy

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
WW-1.1 (0-0.5)	S	02-04-20 11:55	0 - 0.5 ft	651649-001
NW-1.2 (0-0.5)	S	02-04-20 11:55	0 - 0.5 ft	651649-002

CASE NARRATIVE

XENCO LABORATORIES

Client Name: Terracon-Lubbock

Project Name: Rock Daisy

Project ID:	*AR197270*	Report Date:	*10-FEB-20*
Work Order Number(s):	*651649*	Date Received:	*02/06/2020*

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:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3116002 Chloride by EPA 300
Lab Sample ID 651649-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD).
Chloride recovered below QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference.
Samples in the analytical batch are: 651649-001, -002.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3116030 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3116032 TPH GRO by EPA 8015 Mod.
Surrogate 4-Bromofluorobenzene recovered below QC limits Data confirmed by re-analysis. Samples affected are: 7696313-1-BLK,651649-002,651649-001.

Batch: LBA-3116035 DRO-ORO By SW8015B
Surrogate Tricosane recovered below QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 651645-001 S,651645-001 SD.

Certificate of Analytical Results 651649

Terracon-Lubbock, Lubbock, TX

Rock Daisy

Sample Id: **WW-1.1 (0-0.5)**
Lab Sample Id: 651649-001
Matrix: Soil
Date Collected: 02.04.20 11.55
Date Received: 02.06.20 17.05
Sample Depth: 0 - 0.5 ft

Analytical Method: Chloride by EPA 300
Prep Method: E300P
Tech: RNL
% Moisture:
Analyst: RNL
Date Prep: 02.07.20 14.00
Basis: Wet Weight
Seq Number: 3116002

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**285**	25.0	0.572	mg/kg	02.07.20 19.22	X	1

Analytical Method: DRO-ORO By SW8015B
Prep Method: SW8015P
Tech: MIT
% Moisture:
Analyst: MIT
Date Prep: 02.07.20 10.50
Basis: Wet Weight
Seq Number: 3116035

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.47	25.0	7.47	mg/kg	02.08.20 02.47	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.47	25.0	7.47	mg/kg	02.08.20 02.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	66	%	65-144	02.08.20 02.47	
n-Triacontane	638-68-6	89	%	46-152	02.08.20 02.47	

Analytical Method: BTEX by EPA 8021B
Prep Method: SW5030B
Tech: MIT
% Moisture:
Analyst: MIT
Date Prep: 02.07.20 11.15
Basis: Wet Weight
Seq Number: 3116030

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00796	0.0176	0.00796	mg/kg	02.07.20 20.12	U	1
Toluene	108-88-3	<0.00412	0.0176	0.00412	mg/kg	02.07.20 20.12	U	1
Ethylbenzene	100-41-4	<0.00542	0.0176	0.00542	mg/kg	02.07.20 20.12	U	1
m,p-Xylenes	179601-23-1	<0.00600	0.0352	0.00600	mg/kg	02.07.20 20.12	U	1
o-Xylene	95-47-6	<0.00600	0.0176	0.00600	mg/kg	02.07.20 20.12	U	1
Total Xylenes	1330-20-7	<0.00600	0.0176	0.00600	mg/kg	02.07.20 20.12	U	1
Total BTEX		<0.00412	0.0176	0.00412	mg/kg	02.07.20 20.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	77	%	68-120	02.07.20 20.12	
a,a,a-Trifluorotoluene	98-08-8	91	%	71-121	02.07.20 20.12	

Certificate of Analytical Results 651649

Terracon-Lubbock, Lubbock, TX

Rock Daisy

Sample Id:	**WW-1.1 (0-0.5)**	Matrix:	Soil	Date Received:	02.06.20 17.05
Lab Sample Id:	651649-001	Date Collected:	02.04.20 11.55	Sample Depth:	0 - 0.5 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	02.07.20 11.15	Basis:	Wet Weight
Seq Number:	3116032				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.239	3.52	0.239	mg/kg	02.07.20 20.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	68	%	76-123	02.07.20 20.12	**
a,a,a-Trifluorotoluene	98-08-8	77	%	69-120	02.07.20 20.12	

Certificate of Analytical Results 651649

Terracon-Lubbock, Lubbock, TX

Rock Daisy

Sample Id:	**NW-1.2 (0-0.5)**	Matrix:	Soil	Date Received:	02.06.20 17.05
Lab Sample Id:	651649-002	Date Collected:	02.04.20 11.55	Sample Depth:	0 - 0.5 ft

Analytical Method: Chloride by EPA 300 | Prep Method: E300P
Tech: RNL | % Moisture:
Analyst: RNL | Date Prep: 02.07.20 14.00 | Basis: Wet Weight
Seq Number: 3116002

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**374**	25.0	0.572	mg/kg	02.07.20 19.50		1

Analytical Method: DRO-ORO By SW8015B | Prep Method: SW8015P
Tech: MIT | % Moisture:
Analyst: MIT | Date Prep: 02.07.20 10.50 | Basis: Wet Weight
Seq Number: 3116035

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	**16.0**	25.0	7.47	mg/kg	02.08.20 03.22	J	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.47	25.0	7.47	mg/kg	02.08.20 03.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	69	%	65-144	02.08.20 03.22	
n-Triacontane	638-68-6	92	%	46-152	02.08.20 03.22	

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Tech: MIT | % Moisture:
Analyst: MIT | Date Prep: 02.07.20 11.15 | Basis: Wet Weight
Seq Number: 3116030

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00883	0.0195	0.00883	mg/kg	02.07.20 22.34	U	1
Toluene	108-88-3	<0.00457	0.0195	0.00457	mg/kg	02.07.20 22.34	U	1
Ethylbenzene	100-41-4	<0.00602	0.0195	0.00602	mg/kg	02.07.20 22.34	U	1
m,p-Xylenes	179601-23-1	<0.00666	0.0391	0.00666	mg/kg	02.07.20 22.34	U	1
o-Xylene	95-47-6	<0.00666	0.0195	0.00666	mg/kg	02.07.20 22.34	U	1
Total Xylenes	1330-20-7	<0.00666	0.0195	0.00666	mg/kg	02.07.20 22.34	U	1
Total BTEX		<0.00457	0.0195	0.00457	mg/kg	02.07.20 22.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	82	%	68-120	02.07.20 22.34	
a,a,a-Trifluorotoluene	98-08-8	95	%	71-121	02.07.20 22.34	

Certificate of Analytical Results 651649

Terracon-Lubbock, Lubbock, TX

Rock Daisy

Sample Id:	**NW-1.2 (0-0.5)**	Matrix:	Soil	Date Received:	02.06.20 17.05
Lab Sample Id:	651649-002	Date Collected:	02.04.20 11.55	Sample Depth:	0 - 0.5 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	02.07.20 11.15	Basis:	Wet Weight
Seq Number:	3116032				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.265	3.91	0.265	mg/kg	02.07.20 22.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	73	%	76-123	02.07.20 22.34	**
a,a,a-Trifluorotoluene	98-08-8	80	%	69-120	02.07.20 22.34	

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.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

\+ NELAC certification not offered for this compound.

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

Terracon-Lubbock
Rock Daisy

Analytical Method: Chloride by EPA 300 | Prep Method: E300P
Seq Number: 3116002 | Matrix: Solid | Date Prep: 02.07.20
MB Sample Id: 7696250-1-BLK | LCS Sample Id: 7696250-1-BKS | LCSD Sample Id: 7696250-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.572	250	232	93	231	92	90-110	0	20	mg/kg	02.07.20 19:08	

Analytical Method: Chloride by EPA 300 | Prep Method: E300P
Seq Number: 3116002 | Matrix: Soil | Date Prep: 02.07.20
Parent Sample Id: 651649-001 | MS Sample Id: 651649-001 S | MSD Sample Id: 651649-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	285	250	478	77	502	87	80-120	5	20	mg/kg	02.07.20 19:36	X

Analytical Method: DRO-ORO By SW8015B | Prep Method: SW8015P
Seq Number: 3116035 | Matrix: Solid | Date Prep: 02.07.20
MB Sample Id: 7696319-1-BLK | LCS Sample Id: 7696319-1-BKS | LCSD Sample Id: 7696319-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Diesel Range Organics (DRO)	<7.48	100	86.2	86	95.0	95	63-139	10	20	mg/kg	02.07.20 16:12	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
Tricosane	68		72		76		65-144	%	02.07.20 16:12
n-Triacontane	97		98		102		46-152	%	02.07.20 16:12

Analytical Method: DRO-ORO By SW8015B | Prep Method: SW8015P
Seq Number: 3116035 | Matrix: Solid | Date Prep: 02.07.20
MB Sample Id: 7696319-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Oil Range Hydrocarbons (ORO)	<7.48	mg/kg	02.07.20 18:43	

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 651649

Terracon-Lubbock

Rock Daisy

Analytical Method: DRO-ORO By SW8015B | Prep Method: SW8015P
Seq Number: 3116035 | Matrix: Soil | Date Prep: 02.07.20
Parent Sample Id: 651645-001 | MS Sample Id: 651645-001 S | MSD Sample Id: 651645-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Diesel Range Organics (DRO)	<7.49	100	72.0	72	73.8	74	63-139	2	20	mg/kg	02.07.20 19:53	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
Tricosane	63	**	62	**	65-144	%	02.07.20 19:53
n-Triacontane	86		84		46-152	%	02.07.20 19:53

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3116030 | Matrix: Solid | Date Prep: 02.07.20
MB Sample Id: 7696312-1-BLK | LCS Sample Id: 7696312-1-BKS | LCSD Sample Id: 7696312-1-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	1.77	89	1.81	91	55-120	2	20	mg/kg	02.07.20 17:24	
Toluene	<0.00468	2.00	1.75	88	1.76	88	77-120	1	20	mg/kg	02.07.20 17:24	
Ethylbenzene	<0.00616	2.00	1.77	89	1.79	90	77-120	1	20	mg/kg	02.07.20 17:24	
m,p-Xylenes	<0.00682	4.00	3.54	89	3.59	90	78-120	1	20	mg/kg	02.07.20 17:24	
o-Xylene	<0.00682	2.00	1.79	90	1.85	93	78-120	3	20	mg/kg	02.07.20 17:24	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	75		80		75		68-120	%	02.07.20 17:24
a,a,a-Trifluorotoluene	84		89		87		71-121	%	02.07.20 17:24

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3116030 | Matrix: Soil | Date Prep: 02.07.20
Parent Sample Id: 651649-001 | MS Sample Id: 651649-001 S | MSD Sample Id: 651649-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00828	1.83	1.10	60	1.05	58	54-120	5	25	mg/kg	02.07.20 20:36	
Toluene	<0.00429	1.83	1.25	68	1.17	64	57-120	7	25	mg/kg	02.07.20 20:36	
Ethylbenzene	<0.00564	1.83	1.33	73	1.26	69	58-131	5	25	mg/kg	02.07.20 20:36	
m,p-Xylenes	<0.00625	3.66	2.65	72	2.51	69	62-124	5	25	mg/kg	02.07.20 20:36	
o-Xylene	<0.00625	1.83	1.29	70	1.25	69	62-124	3	25	mg/kg	02.07.20 20:36	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	86		81		68-120	%	02.07.20 20:36
a,a,a-Trifluorotoluene	99		97		71-121	%	02.07.20 20:36

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 651649

Terracon-Lubbock

Rock Daisy

Analytical Method: TPH GRO by EPA 8015 Mod. Prep Method: SW5030B

Seq Number: 3116032 Matrix: Solid Date Prep: 02.07.20

MB Sample Id: 7696313-1-BLK LCS Sample Id: 7696313-1-BKS LCSD Sample Id: 7696313-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-GRO	<0.271	20.0	19.0	95	18.9	95	35-129	1	20	mg/kg	02.07.20 18:13	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	68	**	102		106		76-123	%	02.07.20 18:13
a,a,a-Trifluorotoluene	71		77		78		69-120	%	02.07.20 18:13

Analytical Method: TPH GRO by EPA 8015 Mod. Prep Method: SW5030B

Seq Number: 3116032 Matrix: Soil Date Prep: 02.07.20

Parent Sample Id: 651649-001 MS Sample Id: 651649-001 S MSD Sample Id: 651649-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-GRO	<0.247	18.2	12.3	68	13.1	66	35-129	6	20	mg/kg	02.07.20 21:23	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	98		102		76-123	%	02.07.20 21:23
a,a,a-Trifluorotoluene	81		81		69-120	%	02.07.20 21:23

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

651649

651649

CHAIN OF CUSTODY RECORD

Terracon

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

Office Location: Lubbock
Project Manager: Joseph Guesnier
Sampler's Name: Bryant McBrayer

LAB USE ONLY
DUE DATE:
TEMP OF COOLER WHEN RECEIVED (°C): 4.7/4.8
Page 1 of 1

Project Number: AR197270
Project Name: Rock Daisy

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	2 oz Glass	4 oz Glass	5035 kit	40 ml VOA	Chloride (EPA Method 300)	TPH Extended 8015	BTEX (EPA Method 8021B)	Hold				Lab Sample ID
S	2/4/2020	11:55	X		WW - 1.1 - (0 - .5)	0	0.5		X			X	X	X					1
S	2/4/2020	12:00	X		NW - 1.2 - (0 - .5)	0	0.5		X			X	X	X					2

(No. Type of Containers: 2 oz Glass, 4 oz Glass, 5035 kit, 40 ml VOA; ANALYSIS REQUESTED: Chloride, TPH, BTEX, Hold)

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

TRRP Laboratory Review Checklist ☐ Yes ☐ No

Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
[signature]	2/6/2020	17:05	[signature]	2/6/2020	17:05
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 Span

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 ________

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

Responsive ■ Resourceful ■ Reliable

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Terracon-Lubbock

Date/ Time Received: 02/06/2020 05:05:00 PM

Work Order #: 651649

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?	**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)?	**N/A**	
#18 Water VOC samples have zero headspace?	**N/A**	

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

Analyst:

PH Device/Lot#:

Checklist completed by: Brenda Ward
Brenda Ward
Date: 02/07/2020

Checklist reviewed by: Jessica Kramer
Jessica Kramer
Date: 02/10/2020

APPENDIX D – 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, Spur Energy Partnes LLC, as reflected in our proposal.

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 Spur Energy Partners LLC, 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 Spur Energy Partners LLC and Terracon. Any unauthorized distribution or reuse is at Spur Energy Partners LLC sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions, and limitations stated in the proposal and Spur Energy Partners 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.