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

State of New Mexico
Energy Minerals and Natural Resources Department

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

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

Incident ID	NCE2002435751
District RP	
Facility ID	
Application ID	

BA8YI-191125-C-1410

Release Notification

Responsible Party

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

Location of Release Source

Latitude 32.617066 Longitude -104.486885
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Rock Daisy Road Release	Site Type Pipeline ROW adjacent to SWD
Date Release Discovered 08/08/2019	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
G	33	26S	25E	Eddy

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 750	Volume Recovered (bbls) 725
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☒ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

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 to remediate the leak and cap off the abandoned line as well as a connection in the active line. The fluid that released to ground was before the excavation was completed to access the line. Vacuum trucks were utilized in the open excavation to recover all remaining fluids. Final residual remediation will follow NMOCD guidelines for leaks and spills.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NCE2002435751
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? The total release was above 50 bls of produced water
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Jerry Mathews called and left a message with Mike Bratcher to inform the NMOCD office of the release.	

Initial Response

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

☒ The source of the release has been stopped.
☒ The impacted area has been secured to protect human health and the environment.
☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

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

Printed Name: Tom Mueh Title: EVP- Ops

Signature: [signature] Date: 11/25/19

email: tom@spurgellc.com Telephone: 281-795-2281

OCD Only

Received by: Cristina Eads Date: 01/24/2020

Form C-141
Page 3

State of New Mexico
Oil Conservation Division

Incident ID	NCE2002435751
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	173 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☒ Yes ☐ No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: ***Each of the following items must be included in the report.***

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

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

Printed Name: Todd Mushro Title: EVP-Op

Signature: [signature] Date: 11/25/19

email: todd@spurepllc.com Telephone: 281-795-2281

OCD Only

Received by: _____ Date: _____

Form C-141
Page 5

State of New Mexico
Oil Conservation Division

Incident ID	NCE2002435751
District RP	
Facility ID	
Application ID	

Remediation Plan

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

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

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

☒ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.

☒ Extents of contamination must be fully delineated.

☒ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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

Printed Name: Todd Mucha Title: EVP-Ops

Signature: [signature] Date: 11/25/19

email: todd@spraepllc.com Telephone: 210-795-2206

OCD Only

Received by: _____ Date: _____

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

Signature: _____ Date: _____

Release Investigation and Remedial Action Plan

General Site Information:
Rock Daisy Road Release

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, TX), approximately 0.25 miles to the North

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

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

November 20, 2019
Terracon Project No. AR197270

Prepared for:
Spur Energy Partners
Houston, Texas

Prepared by:
Terracon Consultants, Inc.
Lubbock, Texas

November 20, 2019

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: **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 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 response actions required for releases of crude oil and produced water. Based on the release investigation assessment, Terracon recommends the following actions be taken to achieve protection of fresh water and the environment in accordance with NMOCD regulations. Terracon developed the Release Investigation and RAP 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 4 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
Staff Scientist
Lubbock

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

Terracon

TABLE OF CONTENTS

TABLE OF CONTENTS (CONTINUED)

Release Investigation and Remedial Action Plan
Rock Daisy Road Release
Unit G and J, Section 33, T26S, R25E
Eddy County, New Mexico
Terracon Project No. AR197270
November 20, 2019

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 4 in Appendix A. A map illustrating the site's location in reference to NMOCD Karst mapping database is presented as Figure 5 in Appendix A.

2.0 SCOPE OF SERVICES

Terracon's scope of services is 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 RAP 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.

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	
	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 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 off the abandoned line as well as T 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 replacing the malfunctioning pump and the corroded valve in the pipeline that failed. Spur enlisted the help of Terracon to assess the impacted areas of the release

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 Tributary to North Seven Rivers is located approxiamtely 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 low level Karst risk area. Based on site observations within the extent of the release margins the potential for Karst formations in this specific area are of low potential. The site has a layer of solid competent rock at 80 inches bgs. The full extent of release quantities and excavation activities are not anticipated to be advanced greater than 48 inches bgs.

5.6 Groundwater Quality

Groundwater quality at the site is prodimently 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 below 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**
≤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, exclusive of the Reclamation Zone (surface to 4 ft. bgs), are as follows:

Constituent	Remediation Limit
Chloride	20,000 mg/kg
TPH (GRO+DRO+MRO)	2,500 mg/kg
TPH (GRO+DRO)	1,000 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 will use for analysis of soil samples analyzed for petroleum related constituents.

- Chloride – EPA Method 300.0
- Total Petroleum Hydrocarbons – TPH (GRO+DRO+MRO) – EPA Method 8015M

- Benzene, toluene, ethylbenzene and total xylenes (BTEX) – EPA Method 8021B
- Benzene – EPA Method 8021B

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 1.

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 1.

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). 22 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.

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 (3.0 to 3.5 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 1.

8.1.2 Remediation Assessment Data Evaluation

At each of the soil boring locations, a soil sample greater than a depth of 5 ft bgs were not obtained due to encountering a restrictive formation at depth.

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 stock pile (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 compotent rock, further analytical evaluation of deeper horizons appears unwarranted at this time.

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 3,000 cy of chloride impacted material will be required to be excavated and disposed of at a permitted disposal facility under manifest.

9.2 Remediation Response Objectives

Following excavation to recommended Reclamation depths, 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 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 but below 20,000 mg/kg, Terracon recommends hydro-vacing 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. Terracon will additionally include photo logs of the hydro-vacing activities with the closure report.

Based on the anticipated depth to groundwater, it is anticipated that a remedial response will not be warranted within the soils at depths greater than 4 ft. bgs.

9.3 Soil Management

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

10.0 TERMINATION OF REMEDIAL ACTIONS, FINAL CLOSURE AND REPORTING

10.1 Termination of Reclamation and Remedial Actions

Reclamation and remedial actions at the site will be terminated when the confirmation samples indicate that the above objectives have been completed within the reclamation and remedial depth designations. The intent of the reclamation and remedial approaches are to achieve compliance with NMOCD regulatory objectives in ensuring that any remaining contaminants will not pose a threat to present or foreseeable beneficial use of fresh water, the public health and the environment.

10.2 Final Closure

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

10.3 Final Report

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

APPENDIX A – FIGURES AND TABLES

Figure 1 – Topographic Map

Figure 2 – Site Diagram

Figure 3 – Chloride Contamination Concentration Map

Figure 4 – NMOSE POD Location Map

Figure 5 – Cave Karst Public UCP

Table 1 – Soil Sample Analytical Results

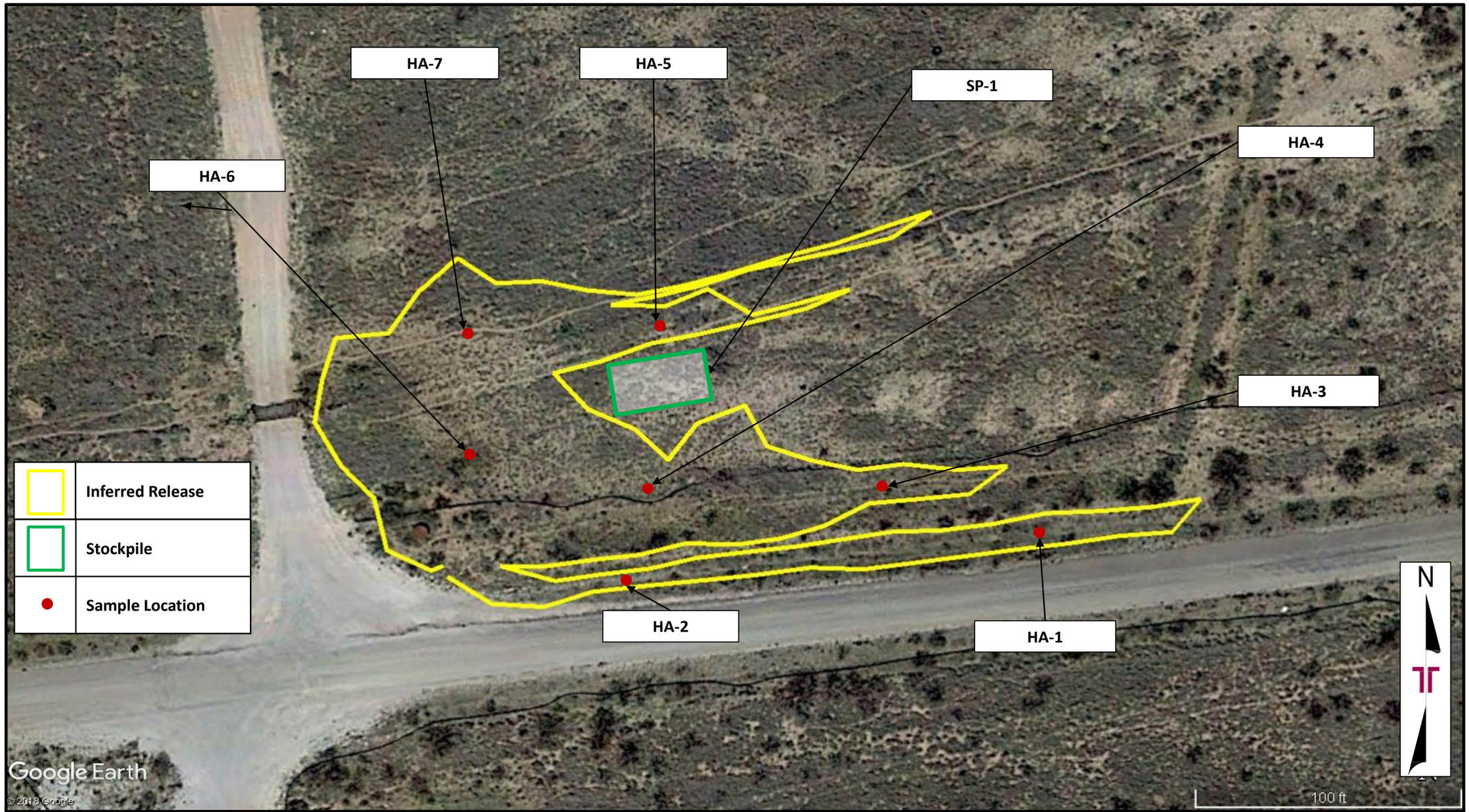
Project No.	AR197270
Scale:	As Shown
Source:	Google Earth
Date:	2016

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



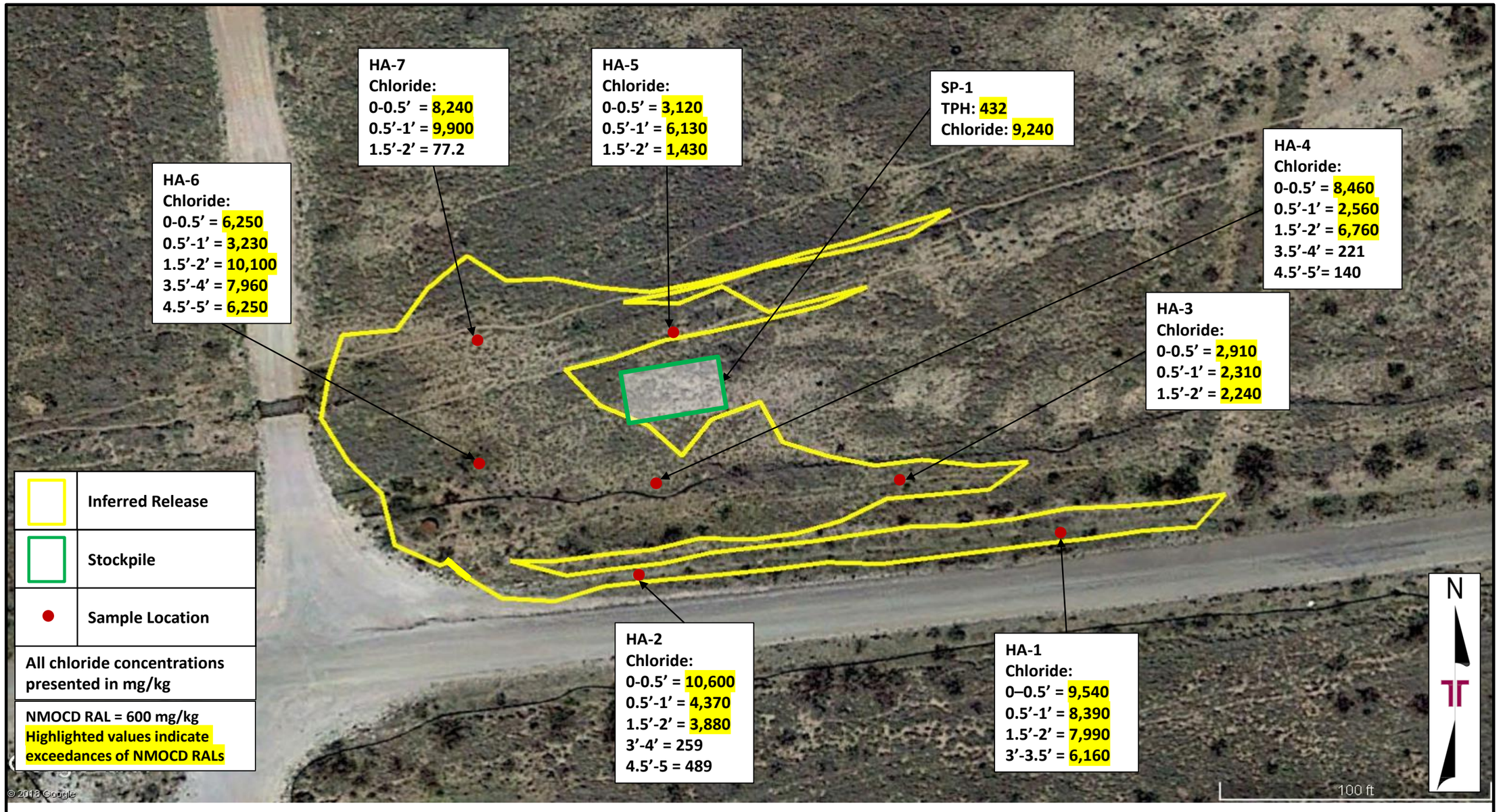
Project No.	AR197270
Scale:	As Shown
Source:	Google Earth
Image Date:	7/15/2019

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

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

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

Figure 3 – Chloride Concentration Map

Rock Daisy Road Release
32.617066°, -104.486885°

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

Figure 4 - NMOSE POD Location Map

11/20/2019 11:19:08 AM

OSE District Boundary

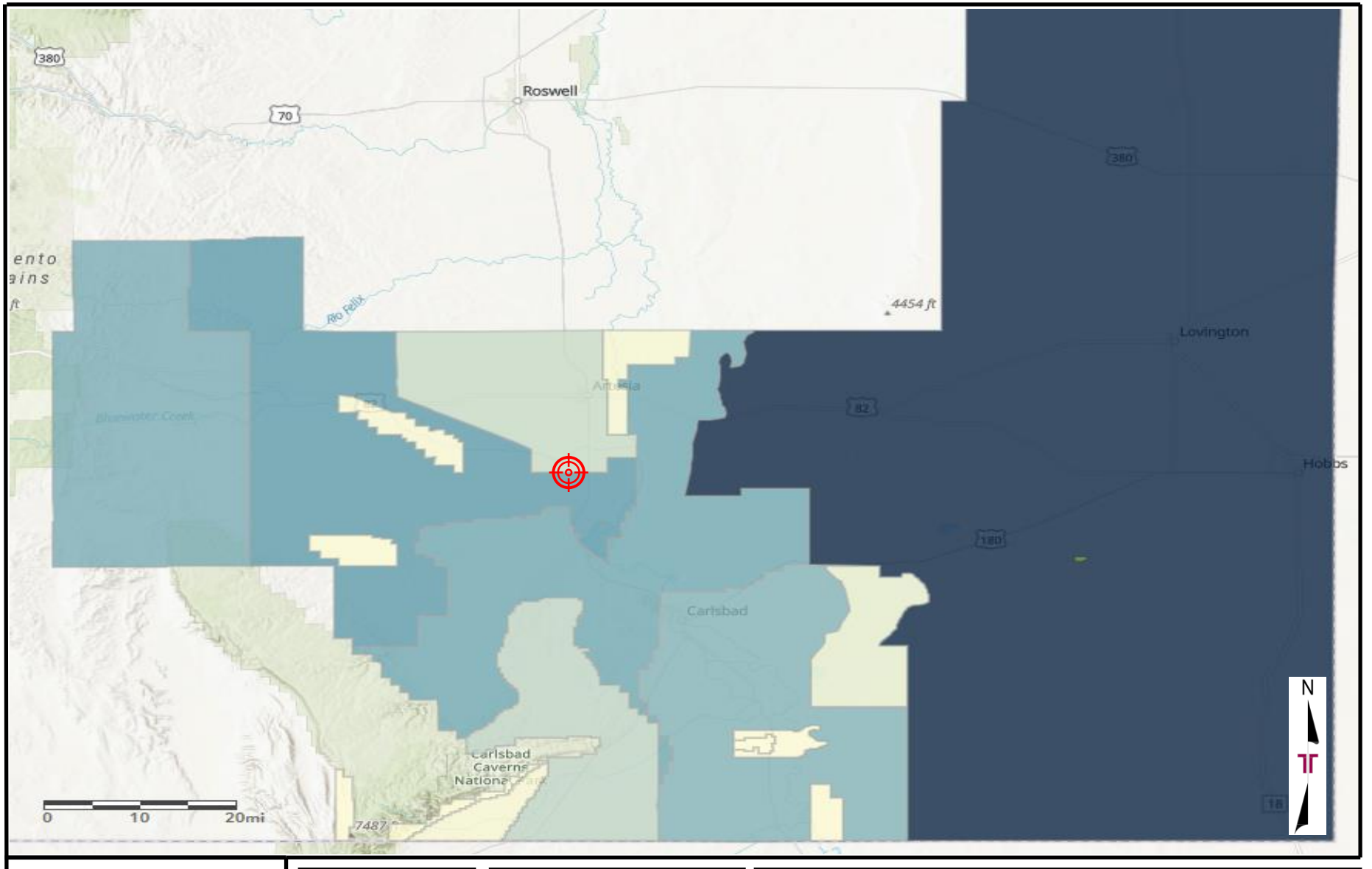
1:36,112

0 0.35 0.7 1.4 mi

0 0.5 1 2 km

Esri, HERE, Garmin, (c) OpenStreetMap contributors, Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community, Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and

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



Project No.	AR197257
Scale:	As Shown
Source:	ESRI
Date:	09/26/2019

Terracon
Consulting Engineers & Scientists
5827 50th Street, Suite 1 Lubbock, Texas 79424
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Figure 5 - Cave Karst Public UCP

Rock Daisy Road Release
32.617066°, -104.486885°

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

TABLE 1
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 - 3.5	Grab	NA	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 - 3.5	Grab	07/03/19	BTEX - NA	259	10.2	<10.0	<10.0	10.2
	4.5 - 5	Grab	07/03/19	BTEX - NA	489	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**	**10,000**	**1,000**		**N/A**	**2,500**

1. BTEX = Benzene, toluene, ethylbenzene, total xylenes analyzed by EPA Method 8021B
2. Chloride = Chloride analyzed by EPA Method 300.
3. TPH = Total petroleum hydrocarbons analyzed by EPA Method 8015M (GRO/DRO/MRO)
4. New Mexico Administration Code (NMAC) Restoration, Reclamation, and Re-vegetation (19.15.29.13) New Mexico Administration Code (NMAC) – D (Reclamation of areas no longer in use) for soils extending to 4 ft. bgs
5. New Mexico Oil Conservation Division (NMOCD) Remediation and Delineation Standards are proposed in 19.15.29.12 NMAC - N, 8/14/2018

< = Constituent not detected above the indicated laboratory SDL
NA = Not Analyzed
N/A = Not Applicable
Bold and Highlight denotes concentrations that exceed the New Mexico Oil Conservation Division (NMOCD) Reclamation and/or Remediation and Delineation Standards.

TABLE 1
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-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 - 3.5	Grab	07/03/19	BTEX - NA	NA	NA			
	4.5 - 5	Grab	07/03/19	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 - 3.5	Grab	07/03/19	BTEX - NA	221	10.8	<9.99	<9.99	10.8
	4.5 - 5	Grab	07/03/19	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**	**10,000**	**1,000**		**N/A**	**2,500**

1. BTEX = Benzene, toluene, ethylbenzene, total xylenes analyzed by EPA Method 8021B
2. Chloride = Chloride analyzed by EPA Method 300.
3. TPH = Total petroleum hydrocarbons analyzed by EPA Method 8015M (GRO/DRO/MRO)
4. New Mexico Administration Code (NMAC) Restoration, Reclamation, and Re-vegetation (19.15.29.13) New Mexico Administration Code (NMAC) – D (Reclamation of areas no longer in use) for soils extending to 4 ft. bgs
5. New Mexico Oil Conservation Division (NMOCD) Remediation and Delineation Standards are proposed in 19.15.29.12 NMAC - N, 8/14/2018

< = Constituent not detected above the indicated laboratory SDL
NA = Not Analyzed
N/A = Not Applicable
Bold and Highlight denotes concentrations that exceed the New Mexico Oil Conservation Division (NMOCD) Reclamation and/or Remediation and Delineation Standards.

TABLE 1
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
	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
	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
	3 - 3.5	Grab	NA	BTEX - NA	**NA**	NA			
	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
	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
	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
	3 - 3.5	Grab	NA	BTEX - NA	**7,960**	<9.97	<9.97	<9.97	<9.97
	4.5 - 5	Grab	NA	BTEX - NA	6,250	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**	**10,000**	**1,000**		**N/A**	**2,500**

1. BTEX = Benzene, toluene, ethylbenzene, total xylenes analyzed by EPA Method 8021B
2. Chloride = Chloride analyzed by EPA Method 300.
3. TPH = Total petroleum hydrocarbons analyzed by EPA Method 8015M (GRO/DRO/MRO)
4. New Mexico Administration Code (NMAC) Restoration, Reclamation, and Re-vegetation (19.15.29.13) New Mexico Administration Code (NMAC) – D (Reclamation of areas no longer in use) for soils extending to 4 ft. bgs
5. New Mexico Oil Conservation Division (NMOCD) Remediation and Delineation Standards are proposed in 19.15.29.12 NMAC - N, 8/14/2018

< = Constituent not detected above the indicated laboratory SDL
NA = Not Analyzed
N/A = Not Applicable
Bold and Highlight denotes concentrations that exceed the New Mexico Oil Conservation Division (NMOCD) Reclamation and/or Remediation and Delineation Standards.

TABLE 1
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-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
	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
	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
	3 - 3.5	Grab	07/03/19	BTEX - NA	NA	NA			
	4.5 - 5	Grab	07/03/19	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**	**10,000**	**1,000**		**N/A**	**2,500**

1. BTEX = Benzene, toluene, ethylbenzene, total xylenes analyzed by EPA Method 8021B
2. Chloride = Chloride analyzed by EPA Method 300.
3. TPH = Total petroleum hydrocarbons analyzed by EPA Method 8015M (GRO/DRO/MRO)
4. New Mexico Administration Code (NMAC) Restoration, Reclamation, and Re-vegetation (19.15.29.13) New Mexico Administration Code (NMAC) – D (Reclamation of areas no longer in use) for soils extending to 4 ft. bgs
5. New Mexico Oil Conservation Division (NMOCD) Remediation and Delineation Standards are proposed in 19.15.29.12 NMAC - N, 8/14/2018

< = Constituent not detected above the indicated laboratory SDL

NA = Not Analyzed

N/A = Not Applicable

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

APPENDIX 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

APPENDIX C – ANALYTICAL REPORT AND CHAIN OF CUSTODY

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: 23-AUG-19
Project Manager: Jessica Kramer

Analysis Requested	*Lab Id:*	634272-001		634272-002		634272-003		634272-005		634272-006		634272-007	
	Field Id:	HA-1 (0-0.5)		HA-1 (0.5-1)		HA-1 (1.5-2)		HA-2 (0-0.5)		HA-2 (0.5-1)		HA-2 (1.5-2)	
	Depth:	0-0.5 ft		0.5-1 ft		1.5-2 ft		0-0.5 ft		0.5-1 ft		1.5-2 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 12:05		Aug-14-19 12:10		Aug-14-19 12:15	
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		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		Aug-21-19 23:31	
	Units/RL:	mg/kg	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	<0.00878	0.0194
Toluene		<0.00409	0.0175	<0.00439	0.0188	<0.00417	0.0178	<0.00436	0.0186	<0.00416	0.0178	<0.00454	0.0194
Ethylbenzene		<0.00538	0.0175	<0.00578	0.0188	<0.00549	0.0178	<0.00574	0.0186	<0.00547	0.0178	<0.00598	0.0194
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	<0.00662	0.0388
o-Xylene		<0.00596	0.0175	<0.00640	0.0188	<0.00608	0.0178	<0.00635	0.0186	<0.00606	0.0178	<0.00662	0.0194
Total Xylenes		0.0245	0.0175	<0.00640	0.0188	<0.00608	0.0178	0.0130 J	0.0186	<0.00606	0.0178	<0.00662	0.0194
Total BTEX		0.0245	0.0175	<0.00439	0.0188	<0.00417	0.0178	0.0130 J	0.0186	<0.00416	0.0178	<0.00454	0.0194
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-19-19 11:03	
	Analyzed:	Aug-19-19 11:09		Aug-19-19 11:21		Aug-19-19 11:34		Aug-19-19 11:47		Aug-19-19 11:59		Aug-19-19 12:12	
	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	10600	100	4370	101	3880	9.94
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-21-19 11:24		Aug-21-19 11:27		Aug-21-19 11:30	
	Analyzed:	Aug-21-19 13:32		Aug-21-19 14:43		Aug-21-19 15:21		Aug-21-19 15:40		Aug-21-19 15:59		Aug-21-19 16:18	
	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	<9.96	49.8	<10.0	50.0	<9.99	50.0
Diesel Range Organics (DRO)		<9.92	49.6	12.6 J	49.7	<9.97	49.9	25.1 J	49.8	<10.0	50.0	<9.99	50.0
Motor Oil Range Hydrocarbons (MRO)		<9.92	49.6	<9.93	49.7	<9.97	49.9	<9.96	49.8	<10.0	50.0	<9.99	50.0
Total TPH		<9.92	49.6	12.6 J	49.7	<9.97	49.9	25.1 J	49.8	<10.0	50.0	<9.99	50.0

Version: 1.%

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: 23-AUG-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	634272-010		634272-011		634272-012		634272-013		634272-014		634272-015	
	Field Id:	HA-3 (0-0.5)		HA-3 (0.5-1)		HA-3 (1.5-2)		HA-4 (0-0.5)		HA-4 (0.5-1)		HA-4 (1.5-2)	
	Depth:	0-0.5 ft		0.5-1 ft		1.5-2 ft		0-0.5 ft		0.5-1 ft		1.5-2 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Aug-14-19 12:30		Aug-14-19 12:35		Aug-14-19 12:40		Aug-14-19 12:45		Aug-14-19 12:50		Aug-14-19 12:55	
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		Aug-21-19 12:00	
	Analyzed:	Aug-21-19 23:58		Aug-22-19 00:24		Aug-22-19 00:51		Aug-22-19 01:18		Aug-22-19 03:05		Aug-22-19 03:31	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00822	0.0182	<0.00899	0.0199	<0.00892	0.0197	<0.00856	0.0189	<0.00853	0.0189	<0.00843	0.0187
Toluene		<0.00425	0.0182	<0.00465	0.0199	<0.00462	0.0197	<0.00443	0.0189	<0.00442	0.0189	<0.00437	0.0187
Ethylbenzene		<0.00560	0.0182	<0.00612	0.0199	<0.00607	0.0197	<0.00583	0.0189	<0.00581	0.0189	<0.00575	0.0187
m,p-Xylenes		<0.00620	0.0364	<0.00678	0.0398	<0.00673	0.0394	<0.00646	0.0379	<0.00643	0.0377	<0.00636	0.0373
o-Xylene		<0.00620	0.0182	<0.00678	0.0199	<0.00673	0.0197	<0.00646	0.0189	<0.00643	0.0189	<0.00636	0.0187
Total Xylenes		<0.00620	0.0182	<0.00678	0.0199	<0.00673	0.0197	<0.00646	0.0189	<0.00643	0.0189	<0.00636	0.0187
Total BTEX		<0.00425	0.0182	<0.00465	0.0199	<0.00462	0.0197	<0.00443	0.0189	<0.00442	0.0189	<0.00437	0.0187
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-19-19 11:03	
	Analyzed:	Aug-19-19 12:24		Aug-19-19 13:02		Aug-19-19 13:14		Aug-19-19 13:52		Aug-19-19 14:04		Aug-19-19 14:17	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		2910	9.88	2310	9.94	2240	10.0	8460	99.6	2560	9.94	6760	100
TPH By SW8015 Mod SUB: T104704215-19-29	*Extracted:*	Aug-21-19 11:33		Aug-21-19 11:36		Aug-21-19 11:39		Aug-21-19 11:42		Aug-21-19 11:45		Aug-21-19 11:48	
	Analyzed:	Aug-21-19 17:15		Aug-21-19 17:34		Aug-21-19 17:53		Aug-21-19 18:12		Aug-21-19 18:31		Aug-21-19 18:50	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<9.98	49.9	<9.97	49.9	<9.97	49.9	<10.0	50.0	<9.92	49.6	<9.95	49.8
Diesel Range Organics (DRO)		<9.98	49.9	<9.97	49.9	<9.97	49.9	<10.0	50.0	<9.92	49.6	<9.95	49.8
Motor Oil Range Hydrocarbons (MRO)		<9.98	49.9	<9.97	49.9	<9.97	49.9	<10.0	50.0	<9.92	49.6	<9.95	49.8
Total TPH		<9.98	49.9	<9.97	49.9	<9.97	49.9	<10.0	50.0	<9.92	49.6	<9.95	49.8

Version: 1.%

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: 23-AUG-19
Project Manager: Jessica Kramer

Analysis Requested		634272-018		634272-019		634272-020		634272-021		634272-022		634272-023	
	Lab Id:	634272-018		634272-019		634272-020		634272-021		634272-022		634272-023	
	Field Id:	HA-5 (0-0.5)		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)	
	Depth:	0-0.5 ft		0.5-1 ft		1.5-2 ft		0-0.5 ft		0.5-1 ft		1.5-2 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Aug-14-19 13:10		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	
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		Aug-21-19 12:00	
	Analyzed:	Aug-22-19 03:58		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	mg/kg	RL
Benzene		<0.00866	0.0192	<0.00878	0.0194	<0.00825	0.0182	<0.00842	0.0186	<0.00893	0.0198	<0.00883	0.0195
Toluene		<0.00448	0.0192	<0.00454	0.0194	<0.00427	0.0182	<0.00436	0.0186	<0.00462	0.0198	<0.00457	0.0195
Ethylbenzene		<0.00590	0.0192	<0.00598	0.0194	<0.00562	0.0182	<0.00574	0.0186	<0.00609	0.0198	<0.00602	0.0195
m,p-Xylenes		<0.00653	0.0383	<0.00662	0.0388	<0.00622	0.0365	0.0130 J	0.0372	0.0178 J	0.0395	<0.00666	0.0391
o-Xylene		<0.00653	0.0192	<0.00662	0.0194	<0.00622	0.0182	<0.00635	0.0186	<0.00674	0.0198	<0.00666	0.0195
Total Xylenes		<0.00653	0.0192	<0.00662	0.0194	<0.00622	0.0182	0.0130 J	0.0186	0.0178 J	0.0198	<0.00666	0.0195
Total BTEX		<0.00448	0.0192	<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-19-19 11:03	
	Analyzed:	Aug-19-19 14:29		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	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		3120	9.94	6130	99.2	1430	10.0	6250	99.8	3230	10.0	10100	99.4
TPH By SW8015 Mod SUB: T104704215-19-29	Extracted:	Aug-21-19 11:51		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	
	Analyzed:	Aug-21-19 19:09		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	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<9.96	49.8	<9.90	49.5	<9.95	49.8	10.9 J	49.7	<9.95	49.8	11.1 J	50.0
Diesel Range Organics (DRO)		<9.96	49.8	<9.90	49.5	<9.95	49.8	14.0 J	49.7	<9.95	49.8	21.2 J	50.0
Motor Oil Range Hydrocarbons (MRO)		<9.96	49.8	<9.90	49.5	<9.95	49.8	<9.94	49.7	<9.95	49.8	<9.99	50.0
Total TPH		<9.96	49.8	<9.90	49.5	<9.95	49.8	24.9 J	49.7	<9.95	49.8	32.3 J	50.0

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

Version: 1.%

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: 23-AUG-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	634272-026		634272-027		634272-028		634272-029					
	Field Id:	HA-7 (0-0.5)		HA-7 (0.5-1)		HA-7 (1.5-2)		SP-1					
	Depth:	0-0.5 ft		0.5-1 ft		1.5-2 ft							
	Matrix:	SOIL		SOIL		SOIL		SOIL					
	Sampled:	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-19-19 11:03		Aug-19-19 11:03		Aug-19-19 11:45		Aug-19-19 11:45					
	Analyzed:	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				
Chloride		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

Version: 1.%

Jessica Kramer
Project Assistant

Analytical Report 634272

for

Terracon-Lubbock

Project Manager: Joseph Guesnier

Rock Daisy Road Release

AR197270

23-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)

23-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-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-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-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-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
HA-1 (3.5-4R)	S	08-14-19 12:00	3.5 - 4 ft	Not Analyzed
HA-2 (3.5-4)	S	08-14-19 12:20	3.5 - 4 ft	Not Analyzed
HA-2 (4.5-5)	S	08-14-19 12:25	4.5 - 5 ft	Not Analyzed
HA-4 (3.5-4)	S	08-14-19 13:00	3.5 - 4 ft	Not Analyzed
HA-4 (4.5-5)	S	08-14-19 13:05	4.5 - 5 ft	Not Analyzed
HA-6 (3.5-4)	S	08-14-19 13:40	3.5 - 4 ft	Not Analyzed
HA-6 (4.5-5)	S	08-14-19 13:45	4.5 - 5 ft	Not Analyzed

CASE NARRATIVE

Client Name: Terracon-Lubbock

Project Name: Rock Daisy Road Release

Project ID: *AR197270*
Work Order Number(s): *634272*

Report Date: *23-AUG-19*
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	

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)**	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:	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	**7990**	101	3.56	mg/kg	08.19.19 11.34		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ISU			% Moisture:	
Analyst:	ISU	Date Prep:	08.21.19 11.21	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 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-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	

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	

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	

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:	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	

Certificate of Analytical Results 634272

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road Release

Sample Id:	**HA-2 (1.5-2)**	Matrix:	Soil	Date Received:	08.16.19 16.33
Lab Sample Id:	634272-007	Date Collected:	08.14.19 12.15	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	**3880**	9.94	0.352	mg/kg	08.19.19 12.12		1

Analytical Method: TPH By SW8015 Mod Prep Method: TX1005P
Tech: ISU % Moisture:
Analyst: ISU Date Prep: 08.21.19 11.30 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	<9.99	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)**	Matrix:	Soil	Date Received:	08.16.19 16.33
Lab Sample Id:	634272-007	Date Collected:	08.14.19 12.15	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	

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:	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	

Certificate of Analytical Results 634272

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	

Certificate of Analytical Results 634272

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	

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	

Certificate of Analytical Results 634272

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)**	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:	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	

Certificate of Analytical Results 634272

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	

Certificate of Analytical Results 634272

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	

Certificate of Analytical Results 634272

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road Release

Sample Id:	**HA-5 (0-0.5)**	Matrix:	Soil	Date Received:	08.16.19 16.33
Lab Sample Id:	634272-018	Date Collected:	08.14.19 13.10	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	**3120**	9.94	0.352	mg/kg	08.19.19 14.29		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ISU			% Moisture:	
Analyst:	ISU	Date Prep:	08.21.19 11.51	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 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	

Certificate of Analytical Results 634272

Terracon-Lubbock, Lubbock, TX

Rock Daisy Road Release

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

Certificate of Analytical Results 634272

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	

Certificate of Analytical Results 634272

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)**	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:	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	**3230**	10.0	0.355	mg/kg	08.19.19 16.09		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ISU			% Moisture:	
Analyst:	ISU	Date Prep:	08.21.19 12.03	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 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	

Certificate of Analytical Results 634272

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:	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	**8240**	99.2	3.51	mg/kg	08.19.19 16.34		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ISU			% Moisture:	
Analyst:	ISU	Date Prep:	08.21.19 12.09	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	<9.94	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	

Certificate of Analytical Results 634272

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	

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:	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	

Certificate of Analytical Results 634272

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	

Certificate of Analytical Results 634272

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:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	08.21.19 12.00	Basis:	Wet Weight
Seq Number:	3099287				

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**	Matrix:	Soil	Date Received:	08.16.19 16.33
Lab Sample Id:	634272-029	Date Collected:	08.14.19 15.30		
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:	3099287				

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: 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

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	

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

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

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

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

QC Summary 634272

Terracon-Lubbock

Rock Daisy Road Release

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: **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

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

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: 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

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 — 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: 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

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE:

TEMP OF COOLER WHEN RECEIVED (°C): 3.4|3.5

Project Number: AR197270

Project Name: Rock Daisy Road Release

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 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

	Date	Time		Date	Time
Relinquished by (Signature)	8-15-19	4:58	Received by (Signature)	8/15/19	4:33
Relinquished by (Signature)			Received by (Signature)		
Relinquished by (Signature)			Received by (Signature)		
Relinquished by (Signature)			Received by (Signature)		

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 _____

CHAIN OF CUSTODY RECORD

Terracon

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

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

Project Number: AR197270
Project Name: Rock Daisy Road Release

ANALYSIS REQUESTED

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

Page 2 of 2

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 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:
	8-15-19	4:33		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: 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 _____

Inter-Office Shipment

IOS Number : 46433

Date/Time: 08.16.2019 10:43
Lab# From: **Lubbock**
Lab# To: **Houston**
Created by: Brenda Ward
Delivery Priority:
Air Bill No.: 776010155026
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
634272-001	S	HA-1 (0-0.5)	08.14.2019 11:45	E300_CL	Chloride by EPA 300	08.22.2019	02.10.2020	JKR	CL	
634272-001	S	HA-1 (0-0.5)	08.14.2019 11:45	SW8015MOD_NM	TPH By SW8015 Mod	08.22.2019	08.28.2019	JKR	PHCC10C28 PHCC28C35	
634272-002	S	HA-1 (0.5-1)	08.14.2019 11:50	E300_CL	Chloride by EPA 300	08.22.2019	02.10.2020	JKR	CL	
634272-002	S	HA-1 (0.5-1)	08.14.2019 11:50	SW8015MOD_NM	TPH By SW8015 Mod	08.22.2019	08.28.2019	JKR	PHCC10C28 PHCC28C35	
634272-003	S	HA-1 (1.5-2)	08.14.2019 11:55	E300_CL	Chloride by EPA 300	08.22.2019	02.10.2020	JKR	CL	
634272-003	S	HA-1 (1.5-2)	08.14.2019 11:55	SW8015MOD_NM	TPH By SW8015 Mod	08.22.2019	08.28.2019	JKR	PHCC10C28 PHCC28C35	
634272-004	S	HA-1 (3.5-4R)	08.14.2019 12:00	E300_CL	Chloride by EPA 300	HOLD	02.10.2020	JKR	CL	
634272-005	S	HA-2 (0-0.5)	08.14.2019 12:05	SW8015MOD_NM	TPH By SW8015 Mod	08.22.2019	08.28.2019	JKR	PHCC10C28 PHCC28C35	
634272-005	S	HA-2 (0-0.5)	08.14.2019 12:05	E300_CL	Chloride by EPA 300	08.22.2019	02.10.2020	JKR	CL	
634272-006	S	HA-2 (0.5-1)	08.14.2019 12:10	E300_CL	Chloride by EPA 300	08.22.2019	02.10.2020	JKR	CL	
634272-006	S	HA-2 (0.5-1)	08.14.2019 12:10	SW8015MOD_NM	TPH By SW8015 Mod	08.22.2019	08.28.2019	JKR	PHCC10C28 PHCC28C35	
634272-007	S	HA-2 (1.5-2)	08.14.2019 12:15	SW8015MOD_NM	TPH By SW8015 Mod	08.22.2019	08.28.2019	JKR	PHCC10C28 PHCC28C35	
634272-007	S	HA-2 (1.5-2)	08.14.2019 12:15	E300_CL	Chloride by EPA 300	08.22.2019	02.10.2020	JKR	CL	
634272-008	S	HA-2 (3.5-4)	08.14.2019 12:20	E300_CL	Chloride by EPA 300	HOLD	02.10.2020	JKR	CL	
634272-009	S	HA-2 (4.5-5)	08.14.2019 12:25	E300_CL	Chloride by EPA 300	HOLD	02.10.2020	JKR	CL	
634272-010	S	HA-3 (0-0.5)	08.14.2019 12:30	E300_CL	Chloride by EPA 300	08.22.2019	02.10.2020	JKR	CL	
634272-010	S	HA-3 (0-0.5)	08.14.2019 12:30	SW8015MOD_NM	TPH By SW8015 Mod	08.22.2019	08.28.2019	JKR	PHCC10C28 PHCC28C35	
634272-011	S	HA-3 (0.5-1)	08.14.2019 12:35	E300_CL	Chloride by EPA 300	08.22.2019	02.10.2020	JKR	CL	
634272-011	S	HA-3 (0.5-1)	08.14.2019 12:35	SW8015MOD_NM	TPH By SW8015 Mod	08.22.2019	08.28.2019	JKR	PHCC10C28 PHCC28C35	
634272-012	S	HA-3 (1.5-2)	08.14.2019 12:40	E300_CL	Chloride by EPA 300	08.22.2019	02.10.2020	JKR	CL	
634272-012	S	HA-3 (1.5-2)	08.14.2019 12:40	SW8015MOD_NM	TPH By SW8015 Mod	08.22.2019	08.28.2019	JKR	PHCC10C28 PHCC28C35	
634272-013	S	HA-4 (0-0.5)	08.14.2019 12:45	SW8015MOD_NM	TPH By SW8015 Mod	08.22.2019	08.28.2019	JKR	PHCC10C28 PHCC28C35	
634272-013	S	HA-4 (0-0.5)	08.14.2019 12:45	E300_CL	Chloride by EPA 300	08.22.2019	02.10.2020	JKR	CL	
634272-014	S	HA-4 (0.5-1)	08.14.2019 12:50	SW8015MOD_NM	TPH By SW8015 Mod	08.22.2019	08.28.2019	JKR	PHCC10C28 PHCC28C35	
634272-014	S	HA-4 (0.5-1)	08.14.2019 12:50	E300_CL	Chloride by EPA 300	08.22.2019	02.10.2020	JKR	CL	

Inter-Office Shipment

IOS Number : 46433

Date/Time: 08.16.2019 10:43
Lab# From: **Lubbock**
Lab# To: **Houston**
Created by: Brenda Ward
Delivery Priority:
Air Bill No.: 776010155026
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
634272-015	S	HA-4 (1.5-2)	08.14.2019 12:55	E300_CL	Chloride by EPA 300	08.22.2019	02.10.2020	JKR	CL	
634272-015	S	HA-4 (1.5-2)	08.14.2019 12:55	SW8015MOD_NM	TPH By SW8015 Mod	08.22.2019	08.28.2019	JKR	PHCC10C28 PHCC28C35	
634272-016	S	HA-4 (3.5-4)	08.14.2019 13:00	E300_CL	Chloride by EPA 300	HOLD	02.10.2020	JKR	CL	
634272-017	S	HA-4 (4.5-5)	08.14.2019 13:05	E300_CL	Chloride by EPA 300	HOLD	02.10.2020	JKR	CL	
634272-018	S	HA-5 (0-0.5)	08.14.2019 13:10	E300_CL	Chloride by EPA 300	08.22.2019	02.10.2020	JKR	CL	
634272-018	S	HA-5 (0-0.5)	08.14.2019 13:10	SW8015MOD_NM	TPH By SW8015 Mod	08.22.2019	08.28.2019	JKR	PHCC10C28 PHCC28C35	
634272-019	S	HA-5 (0.5-1)	08.14.2019 13:15	E300_CL	Chloride by EPA 300	08.22.2019	02.10.2020	JKR	CL	
634272-019	S	HA-5 (0.5-1)	08.14.2019 13:15	SW8015MOD_NM	TPH By SW8015 Mod	08.22.2019	08.28.2019	JKR	PHCC10C28 PHCC28C35	
634272-020	S	HA-5 (1.5-2)	08.14.2019 13:20	E300_CL	Chloride by EPA 300	08.22.2019	02.10.2020	JKR	CL	
634272-020	S	HA-5 (1.5-2)	08.14.2019 13:20	SW8015MOD_NM	TPH By SW8015 Mod	08.22.2019	08.28.2019	JKR	PHCC10C28 PHCC28C35	
634272-021	S	HA-6 (0-0.5)	08.14.2019 13:25	E300_CL	Chloride by EPA 300	08.22.2019	02.10.2020	JKR	CL	
634272-021	S	HA-6 (0-0.5)	08.14.2019 13:25	SW8015MOD_NM	TPH By SW8015 Mod	08.22.2019	08.28.2019	JKR	PHCC10C28 PHCC28C35	
634272-022	S	HA-6 (0.5-1)	08.14.2019 13:30	SW8015MOD_NM	TPH By SW8015 Mod	08.22.2019	08.28.2019	JKR	PHCC10C28 PHCC28C35	
634272-022	S	HA-6 (0.5-1)	08.14.2019 13:30	E300_CL	Chloride by EPA 300	08.22.2019	02.10.2020	JKR	CL	
634272-023	S	HA-6 (1.5-2)	08.14.2019 13:35	SW8015MOD_NM	TPH By SW8015 Mod	08.22.2019	08.28.2019	JKR	PHCC10C28 PHCC28C35	
634272-023	S	HA-6 (1.5-2)	08.14.2019 13:35	E300_CL	Chloride by EPA 300	08.22.2019	02.10.2020	JKR	CL	
634272-024	S	HA-6 (3.5-4)	08.14.2019 13:40	E300_CL	Chloride by EPA 300	HOLD	02.10.2020	JKR	CL	
634272-025	S	HA-6 (4.5-5)	08.14.2019 13:45	E300_CL	Chloride by EPA 300	HOLD	02.10.2020	JKR	CL	
634272-026	S	HA-7 (0-0.5)	08.14.2019 13:50	SW8015MOD_NM	TPH By SW8015 Mod	08.22.2019	08.28.2019	JKR	PHCC10C28 PHCC28C35	
634272-026	S	HA-7 (0-0.5)	08.14.2019 13:50	E300_CL	Chloride by EPA 300	08.22.2019	02.10.2020	JKR	CL	
634272-027	S	HA-7 (0.5-1)	08.14.2019 13:55	E300_CL	Chloride by EPA 300	08.22.2019	02.10.2020	JKR	CL	
634272-027	S	HA-7 (0.5-1)	08.14.2019 13:55	SW8015MOD_NM	TPH By SW8015 Mod	08.22.2019	08.28.2019	JKR	PHCC10C28 PHCC28C35	
634272-028	S	HA-7 (1.5-2)	08.14.2019 14:00	E300_CL	Chloride by EPA 300	08.22.2019	02.10.2020	JKR	CL	
634272-028	S	HA-7 (1.5-2)	08.14.2019 14:00	SW8015MOD_NM	TPH By SW8015 Mod	08.22.2019	08.28.2019	JKR	PHCC10C28 PHCC28C35	
634272-029	S	SP-1	08.14.2019 15:30	E300_CL	Chloride by EPA 300	08.22.2019	02.10.2020	JKR	CL	

Inter Office Shipment or Sample Comments:

Inter-Office Shipment

IOS Number : 46433

Date/Time:	08.16.2019 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
634272-029	S	SP-1	08.14.2019 15:30	SW8015MOD_NM	TPH By SW8015 Mod	08.22.2019	08.28.2019	JKR	PHCC10C28 PHCC28C35	

Inter Office Shipment or Sample Comments:

Relinquished By: 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: _____ Date: 08.17.2019

Ashly Kowalski

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 Date: 08/16/2019
Brenda Ward

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

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.