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	NRM2003858408
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party Spur Energy Partners LLC	OGRID 328947
Contact Name Ryan Barber	Contact Telephone 832-544-9267
Contact email rbarber@spurepllc.com	Incident # *(assigned by OCD)*
Contact mailing address 920 Memorial City Way, Suite 1000 Houston, TX 77024	

Location of Release Source

Latitude 32.6114693 Longitude -104.4704819
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Lakewood Federal #1	Site Type Well pad
Date Release Discovered July 20, 2019	API# *(if applicable)* 30-015-24231

Unit Letter	Section	Township	Range	County
O	34	19S	25E	Eddy

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 10	Volume Recovered (bbls) 5
	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
During completion of the Huber Fed 10H and 12H, the Lakewood Fed #1 saw pressure from the frac and produced water leaked out from the wellhead.

State of New Mexico
Oil Conservation Division

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Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

Initial Response

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

☒ The source of the release has been stopped.

☒ The impacted area has been secured to protect human health and the environment.

☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

☒ All free liquids and recoverable materials have been removed and managed appropriately.

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

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

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

Printed Name: Braidy Moulder Title: EHS Manager

Signature: Braidy Moulder Date: 1-30-2020

email: bmoulder@spurepllc.com Telephone: 713-264-2517

OCD Only

Received by: Ramona Marcus Date: 2/7/2020

Form C-141
Page 3

State of New Mexico
Oil Conservation Division

Incident ID	NRM2003858408
District RP	
Facility ID	
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Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	121 (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 9.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

State of New Mexico
Oil Conservation Division

Incident ID	NRM2003858408
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Facility ID	
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I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Braidy Moulder Title: EHS Manager

Signature: Braidy Moulder Date: 1-30-2020

email: bmoulder@spurepllc.com Telephone: 713-264-2517

OCD Only

Received by: Ramona Marcus Date: 2/7/2020

State of New Mexico
Oil Conservation Division

Incident ID	NRM2003858408
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Remediation Plan

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

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

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

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

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

Printed Name: Braidy Moulder Title: EHS Manager

Signature: Braidy Moulder Date: 1-30-2020

email: bmoulder@spurepllc.com Telephone: 713-264-2517

OCD Only

Received by: Ramona Marcus Date: 2/7/2020

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

Signature: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	NRM2003858408
District RP	
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: ***Each of the following items must be included in the closure report.***

☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☒ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Braidy Moulder Title: EHS Manager

Signature: Braidy Moulder Date: 1-30-2020

email: bmoulder@spurepllc.com Telephone: 713-264-2517

OCD Only

Received by: Ramona Marcus Date: 2/7/2020

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

NRM2003858408

Closure Report

General Site Information:
Lakewood Federal #1

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
North Seven Rivers (North-Central Lea County), approximately 1.1 miles to the North

Driving Directions
From Hwy 82, South on HWY 229 15.2 mi, West on County Road 3.10 mi., South 0.63 mi, then West 0.2 mi, and South 0.24 mi, then West 0.2 mi. to location.

Legal Description
Unit O Section 34, T19S, R25E, Eddy County, New Mexico

October 18, 2019
Terracon Project No. AR197257

Prepared for:
Spur Energy Partners
Houston, Texas

Prepared by:
Terracon Consultants, Inc.
Lubbock, Texas
TBPG Firm No. 50058

October 18, 2019

Terracon

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

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

RE: **Closure Report**
Lakewood Federal #1 Release
Unit O Section 34, T19S, R25E, Eddy County, New Mexico
Terracon Project No. AR197257

Dear Mr. Mucha,

Terracon Consultants, Inc. (Terracon) is pleased to submit our Closure Report for the site referenced above. The Closure Report was developed in accordance with the New Mexico Oil Conservation Division (NMOCD) regulations concerning clean-up actions required for releases of crude oil and produced water. The Closure Report presents a description of the release incident and OCD notification, site characteristics, potential receptors, and remedial actions required for the site. Terracon developed the Closure Report in general accordance with our proposal (PAR197257) dated July 25, 2019.

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

Sincerely,
Terracon Consultants, Inc.

Joseph Guesnier
Staff Scientist
Lubbock

for Erin Loyd, P.G.
Principal
Office Manager – Lubbock

Terracon

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Closure Report
Lakewood Federal #1 Release
Unit O Section 34, Township 19 South, Range 25 East
Eddy County, New Mexico
NMOCD Reference No.
Terracon Project No. AR197257
October 18, 2019

1.0 SITE DESCRIPTION

The site is an approximate 0.8-acre tract of land within the Unit O Section 34, Township 19 South, Range 25 East, Eddy County, New Mexico (hereinafter, the site). The site consists primarily of undeveloped land except for a Oil Well and the construction of a saltwater disposal (SWD) facility to the West. A Topographic Map illustrating the site location is included as Figure 1 and a Site Plan is included as Figure 2 in Appendix A.

2.0 SCOPE OF SERVICES

Terracon's scope of services is to investigate the magnitude and extent of the documented release, remediation and restoration and develop a Closure Report in accordance with the NMOCD requirements that detail site closure activities to be completed. This Closure Report addresses the July 20, 2019 release of approximately 10 barrels (bbls) of produced water which contained an estimated 1 bbls of crude originating from the well head of a pump jack owned by Spur.

3.0 INTRODUCTION AND NOTIFICATION

A release of produced water containing crude oil occurred on July 20, 2019 at the Lakewood Federal #1 well site in Eddy County, New Mexico. The site is operated by Spur. The site is comprised of an approximate 0.8-acre developed area, approximately 16.3 miles southwest of Artesia, New Mexico. Incident information is provided in the following table:

Required Information	Site and Release information	
Responsible party Local contact	The facility is operated by Spur Energy Partners LLC	
	Contact: Mr. Tom 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 July 25, 2019.	
Facility description	The facility is Lakewood Federal #1 in Eddy County, New Mexico. It is an approximate 0.8-acre well located within the Unit O Section	

Required Information	Site and Release information	
	34, Township 19 South, Range 25 East, N.M.P.M., approximately 16.3 miles southwest of Artesia, New Mexico. The site is developed and used as a well pad.	
Time of incident	July 20, 2019, discovered at 7:00 a.m.	
Discharge event	Release of produced water containing crude oil originating from a loosely packed stuffing box on a Spur wellhead. The release origin occurred on the well pad, under development at the time of the release. The release area, near the origin of the release, was limited to an approximately 2,000 sq ft area; the entirety of the release remained on pad. The release is illustrated on Figure 2 of Appendix A	
Type of discharge	The documented fluids release occurred at the surface and appears to be surficial to depth.	
Quantity of spilled material	Total Fluids: 10 bbls	Produced Water: 9 bbls containing approximately 1 bbls of crude oil
Site characteristics	Relatively flat with drainage following the native ground surface; very gently sloping to the south.	
Immediate corrective actions	Pipeline was shut-in, and Terracon Remediation Construction Services (RCS) scraped up and stockpiled affected materials proximate to the release origin.	

4.0 INITIAL RESPONSE ACTIONS

4.1 Source Elimination and Site Security

Initial source elimination was accomplished by the Spur foreman shutting in the wellhead and replacing and tightening the stuffing box. Terracon's RCS secured the site and performed containment and site stabilization activities.

4.2 Containment and Site Stabilization

RCS consolidated and stockpiled affected soils proximate to the release origin, comprising an area measuring approximately 500-square-feet (sf). From this area, the affected materials stockpile totaled an estimated 10-cubic yards (cy). Following consolidation of these materials, RCS fenced off the stockpile to deter inadvertent contact with the materials.

5.0 GENERAL SITE CHARACTERISTICS

5.1 Depth to Groundwater

A water well record search of the NMOSE potable water well (POD) Geographic Information System (GIS) data portal identified one registered well (RA-10898 POD 1) within 1.7 miles of the site. The depth to groundwater at the site is anticipated to be deeper than 100 feet below grade surface (bgs). NMOSE website identified no registered wells within one mile of the site. NMOSE registered wells within 2 miles of the site have an average depth to groundwater of 100 feet bgs, with a maximum reported depth of 121 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

North Seven Rivers (North-Central Lea County), approximately 1.1 miles to the North of the site, is the closest surface water to the site.

5.4 Soil / Waste Characteristics

Soils at the site are mapped as Reagan-Upton associations, 0 to 9 percent slopes. This soil has a surface layer of gravelly loam 0 to 13 inches, cemented layer 13 to 21 inches and very gravelly loam 21 to 60 inches. The formation is categorized as well drained with high runoff.

5.5 Groundwater Quality

Groundwater quality is unknown at the site. As stated previously, there are no wells registered with the NMOSE website within 0.5 miles of the site.

5.6 Karst Characteristics

Terracon evaluated data from the NMOCD Public file sharepoint site for Karst map designations in reference to the site location. The site appears to be within a low level Karst risk area. Based on site obsservations within the extent of the release margins, the potential for Karst formations in this area are “low to no potential”. The site has a layer of solid competent rock at 60 inches bgs. The full extent of release quantities and excavation activities took place not greater than 24 inches bgs.

6.0 SOIL REMEDIAL ACTION LEVELS

Crude oil facilities in New Mexico are generally regulated by the NMOCD. Terracon proposes to remediate produced water and crude oil impacted soil of the Lakewood Federal #1 Release consistent with the remediation/abatement goals and objectives set forth in the New Mexico Oil Conservation Division (NMOCD) *Closure Criteria for Soils Impacted by a Release, June 21, 2018.*

The 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
	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*

6.1 Remediation Levels

Remediation limits for Chlorides, TPH (GRO+DRO+MRO), GRO+DRO, BTEX (includes benzene, toluene, ethylbenzene and xylenes), and Benzene are selected based on *Restoration, Reclamation, and Re-vegetation* (19.15.29.13) NMAC – D (Reclamation of areas no longer in use) being >100 feet:

Constituent	Remediation Limits
Chloride	20,000 mg/kg
TPH (GRO+DRO+MRO)	2,500 mg/kg
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 June 12, 2019 release investigation activities, a total of 10 soil samples were collected from the site and analyzed for BTEX, chloride, and/or TPH. All samples were collected from within the release margins.

8.1 Release Margins Data Evaluation

Benzene was detected above applicable laboratory SDLs in four of the 10 soil samples analyzed within the release margins. The Benzene concentrations ranged from 0.0501 mg/kg in HA-2 (1.5 ft bgs to 2 ft bgs) to 0.266 mg/kg in HA-1 (0.5 ft bgs to 1 ft bgs.). The detected benzene concentrations did not exceed the applicable NMOCD RAL for benzene of 10 mg/kg, as summarized in Table 2.

Total BTEX was detected above applicable laboratory SDLs in seven of the 10 soil samples analyzed within the release margins. The Total BTEX concentration ranged from 0.0501 mg/kg in HA-2 (0.5 ft bgs to 1 ft bgs) to 5.70 mg/kg in HA-1 (1.5 ft bgs to 2 ft bgs). The detected Total BTEX concentrations did not exceed the applicable NMOCD RAL for Total BTEX of 50 mg/kg, as summarized in Table 2.

Total TPH was detected above applicable laboratory SDLs in six of the 10 soil samples analyzed within the release margins. The Total TPH concentration ranged from 143 mg/kg in HA-2 (0.5 ft bgs to 1 ft bgs) to 47,200 mg/kg in HA-1 (surface to 0.5 ft bgs). The samples collected within the release margins did exhibit Total TPH concentrations above the NMOCD RAL of 2,500 mg/kg for Total TPH, as summarized in Table 2.

Chloride was detected above applicable laboratory SDLs in each of the 10 soil samples analyzed within the release margins. The chloride concentrations ranged from 43.9 mg/kg in soil sample HA-1 (surface to 0.5 ft bgs) to 2,910 mg/kg in soil sample HA-3 (surface to 0.5 ft bgs). The samples analyzed within the release margins did not exhibit chloride concentrations above the applicable NMOCD RAL for chloride of 20,000 mg/kg, as summarized in Table 2.

8.2 Release Investigation Data Summary

Based on the review of the above release investigation analytical results, the areas within the release margins exhibited Total TPH concentrations in one location. Based on these

exceedances above NMOCD RALs, Sections 9.0 and subsequent detail recommended remedial response actions to be implemented at the site.

8.3 Confirmation Margins Data Evaluation

During Terracon's confirmation sampling on October 10, 2019 a composite soil sample was taken around the perimeter of the open excavation, a second composite soil sample was taken from the base of the excavation, and one composite soil sample was taken from the stockpiled contaminated material, post reclamation activites. Resulting in three total soil samples being collected from the site and analyzed for BTEX, chloride, and TPH.

8.3.1 Confirmation Assessment Data Evaluation

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

Total BTEX was detected above the applicable laboratory SDL in two of the three soil samples analyzed within the remediated margins. The BTEX concentrations ranged from 0.00600 mg/kg in the confirmation soil sample CS-2.1 (surface to 0.5 ft bgs.) to 0.306 in confirmation soil sample SP-1.1 (1.5 ft bgs to 2 ft bgs). The detected Total BTEX concentrations did not exceed the applicable NMOCD RAL for BTEX of 50 mg/kg, as summarized in Table 2.

Total TPH was detected above applicable laboratory SDLs in each of the three soil samples analyzed within the remediated margins. The Total TPH concentrations ranged from 202 mg/kg in CS-2.1 (surface to 0.5 ft bgs) to 3,830 mg/kg in SP-1.1 (1.5 ft bgs to 2 ft bgs). The samples collected within the release margins with the exception of SP-1.1 did not exhibit Total TPH concentrations above the NMOCD RAL of 2,500 mg/kg for Total TPH, as summarized in Table 2.

Chloride was detected above applicable laboratory SDLs in each of the three soil samples analyzed within the remediated margins. The chloride concentrations ranged from 2.88 mg/kg in soil sample CS-1.1 (2.5 ft bgs to 3 ft bgs) to 450 mg/kg in soil sample SP-1.1 (1.5 ft bgs to 2 ft bgs). The samples analyzed within the release margins did not exhibit chloride concentrations above the applicable NMOCD RAL for chloride of 20,000 mg/kg, as summarized in Table 2.

8.3.2 Confirmation Data Summary

Based on the review of the above confirmation analytical results, the areas within and surrounding the remediation do not exhibit concentrations above the NMOCD RAL for benzene, Total BTEX, chloride and Total TPH. The exception is the contaminated stockpile (SP-1) Based on these results below NMOCD RALs, Sections 9.0 and subsequent detail recommended closure of

response actions to be implemented at the site. Terracon recommends beginning the restoration of the above mentioned site, and disposing of the stockpiled material.

9.0 SOIL REMEDIATION

Impacted soil will be remediated and managed according to the criteria described below which will remove contaminants to protect fresh waters, public health and the environment.

9.1 Contaminated Soils

Soils exceeding the designated NMOCD RALs described in Section 6 will be remediated as follows:

- Highly impacted soils within the release margins, illustrated on Figure 2 of Appendix A, will be excavated either to a maximum depth of 4.5 feet bgs, or upon refusal due to encountering a restrictive barrier, or field evidence demostrates that impacted materials have been sufficiently mitigated, whichever occurs first.
- Following excavation, 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 RALs.
- If impacted materials have not been sufficiently mitigated, a 20-mil liner will either be installed at the top of the restrictive barrier or at 4-feet (if no restrictive barrier encountered) below ground surface to encapsulate the remaining impacted soil at depth.

9.2 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 the R360 Disposal Facility operated by R360 Environmental Solutions, Inc., located in Halfway, New Mexico.

10.0 TERMINATION OF REMEDIAL ACTIONS, FINAL CLOSURE AND REPORTING

10.1 Termination of Remedial Action

Remedial action of soils at the site will be terminated when the following criteria have been met. Contaminated soils will be removed from the site. Sufficient contaminated soil will be removed so that residual contaminant concentrations are below the soil remediation action levels.

If soil action levels cannot practicably be attained, an evaluation of risk will be performed and provided to NMOCD for approval showing that the remaining contaminants will not pose a threat to present or foreseeable beneficial use of fresh water, public health and the environment.

10.2 Final Closure

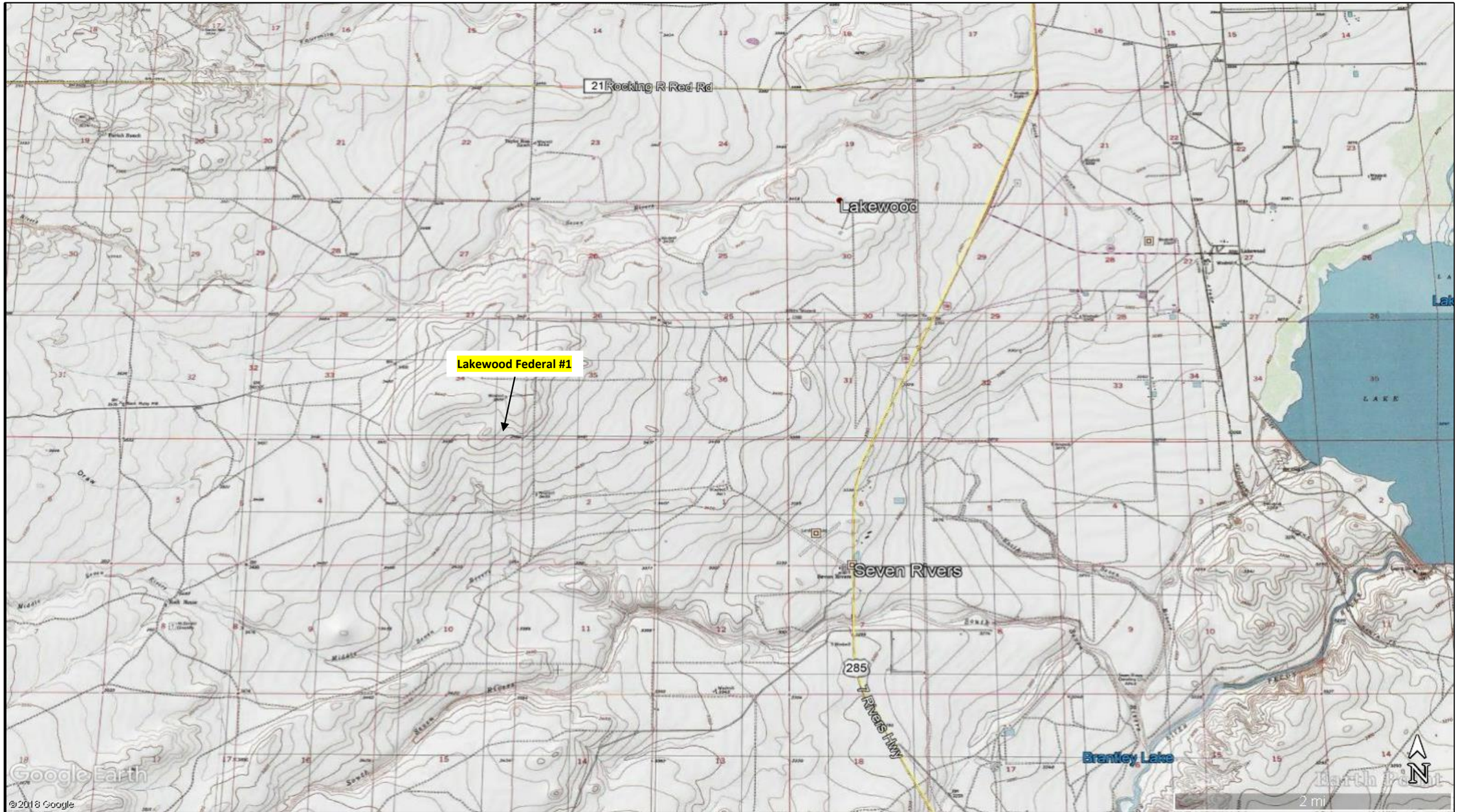
Upon termination of remedial actions (Sections 6 and 9), the area of the release will be closed by backfilling the excavated area, contouring to surrounding area topography and reseeding the area with approved-native vegetative seed.

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 – Contamination Concentration Map
Figure 4 – Remediation Concentration Map
Figure 5 – NMOSE POD Location Map
Figure 6 – Cave Karst Public UCP
Table 2 – Soil Sample Analytical Results



Project No.	AR197257
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

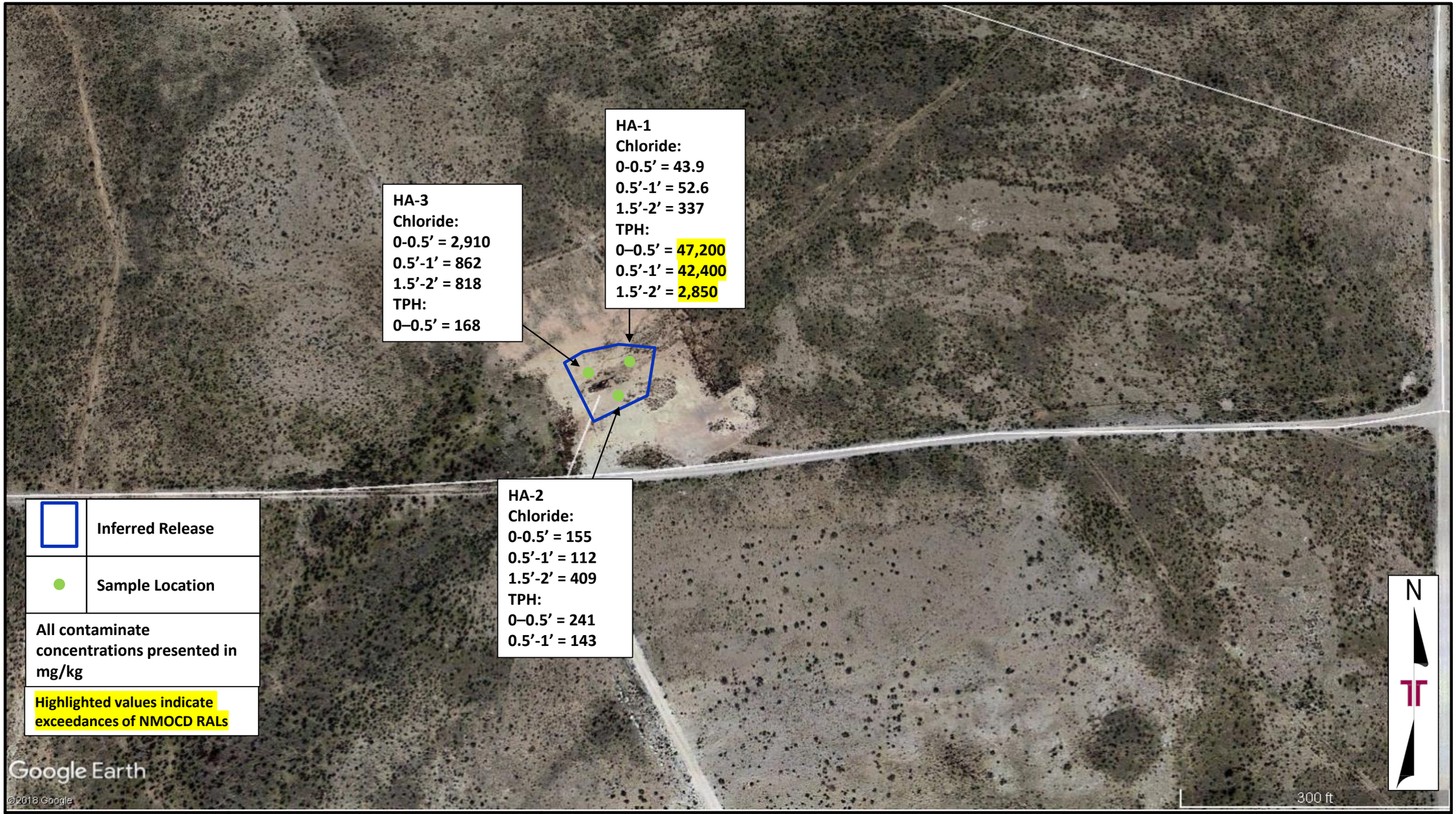
Lakewood Federal #1
32.6114693°, -104.470482°
Eddy County, New Mexico

Project No.	AR197257
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 2 – Site Diagram

Lakewood Federal #1
32.6114693°, -104.470482°
Eddy County, New Mexico



Project No.	AR197257
Scale:	As Shown
Source:	Google Earth
Date:	2016

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5827 50th St. Suite 1 Lubbock, Texas 79424
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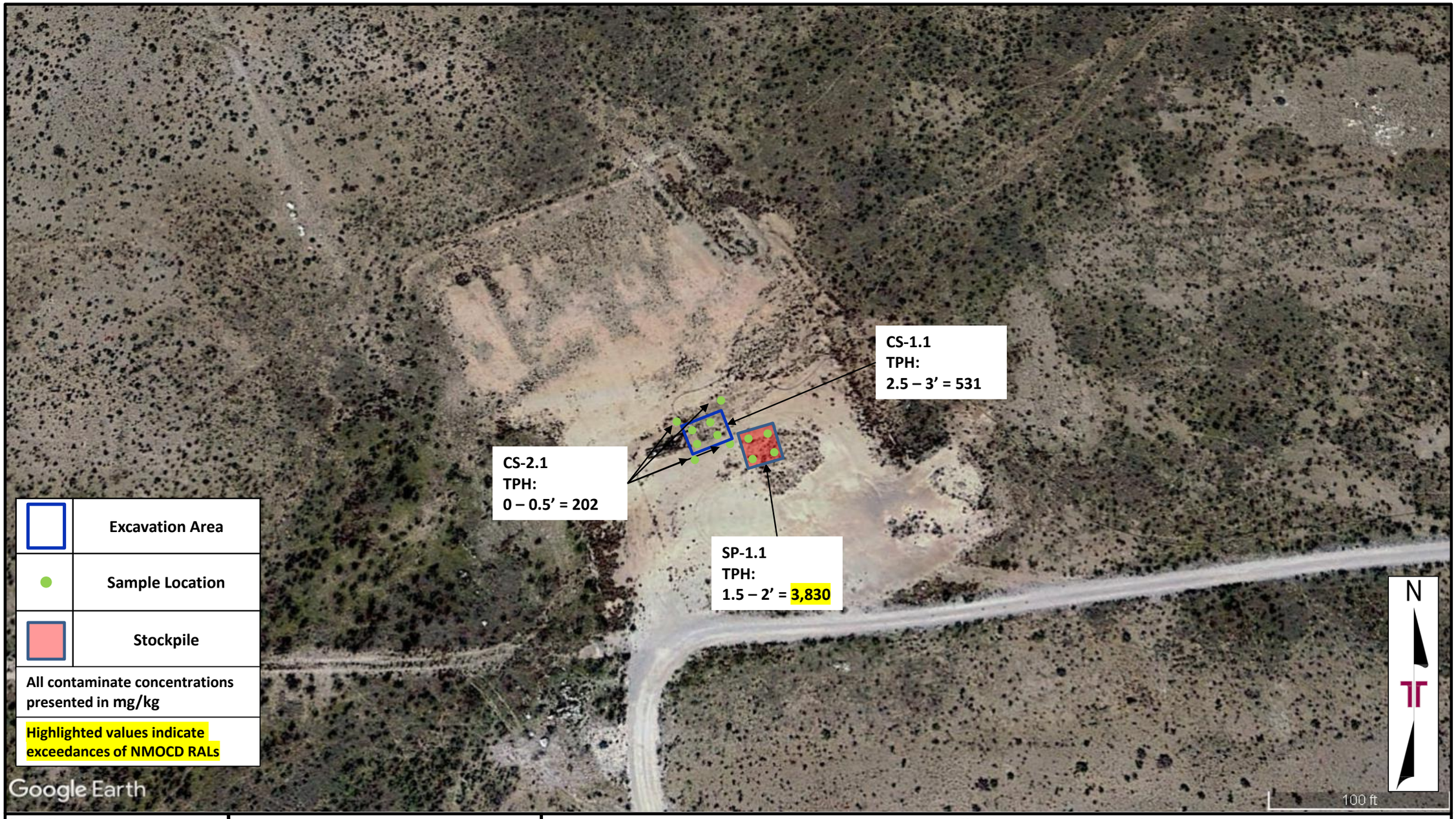
Figure 3 – Contamination Concentration Map

Lakewood Federal #1
32.6114693°, -104.470482°
Eddy County, New Mexico



Project No.	AR197257
Scale:	As Shown
Source:	Google Earth
Date:	2016

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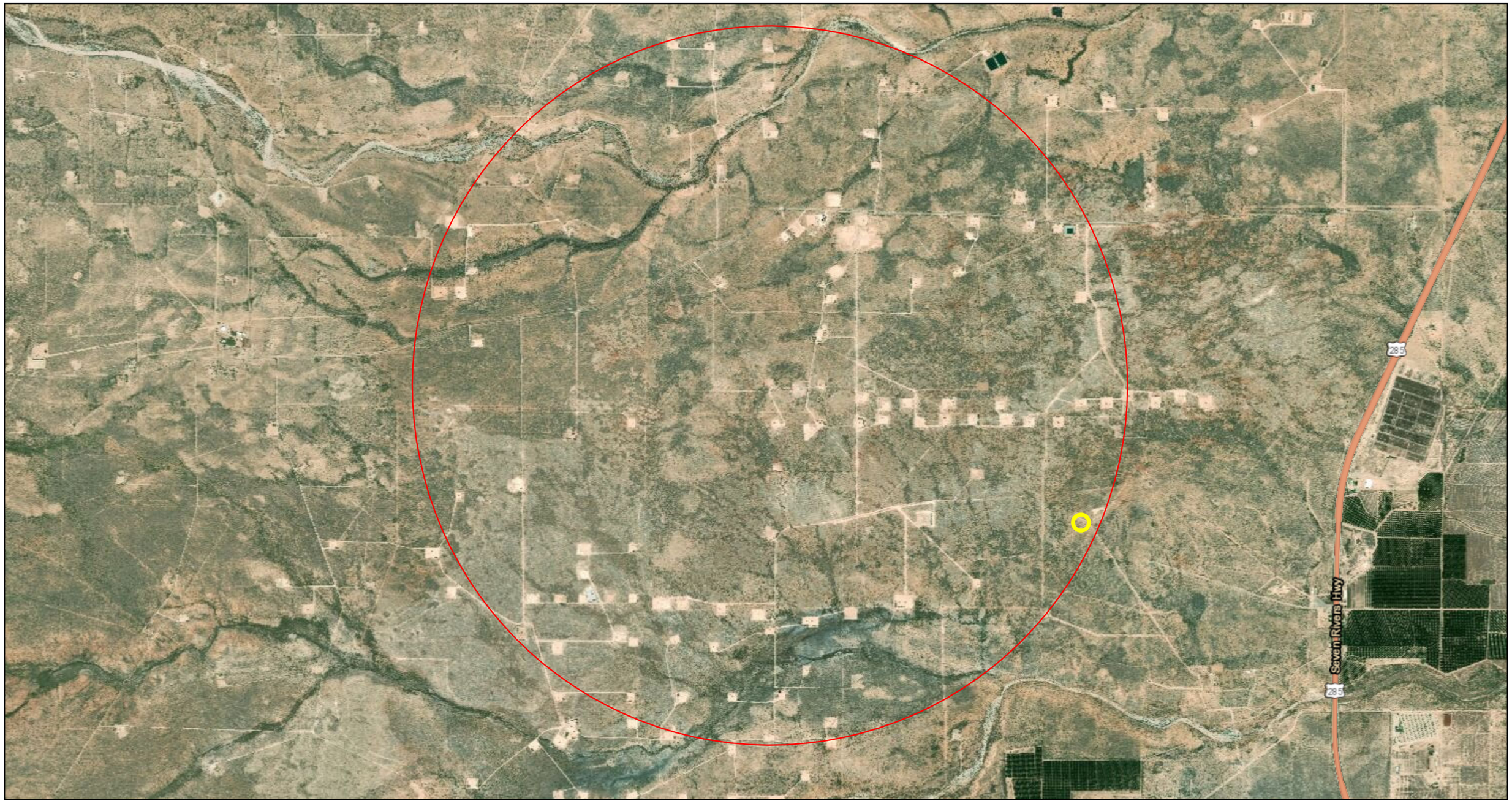
Consulting Engineers & Scientists
5827 50th St. Suite 1 Lubbock, Texas 79424
PH. (806) 300-0104 FAX. (806) 797 0947

Figure 4 – Remediation Concentration Map

Lakewood Federal #1
32.6114693°, -104.470482°
Eddy County, New Mexico

Figure 5 - NMOSE POD Location Map



10/17/2019 11:27:55 AM

OSE District Boundary

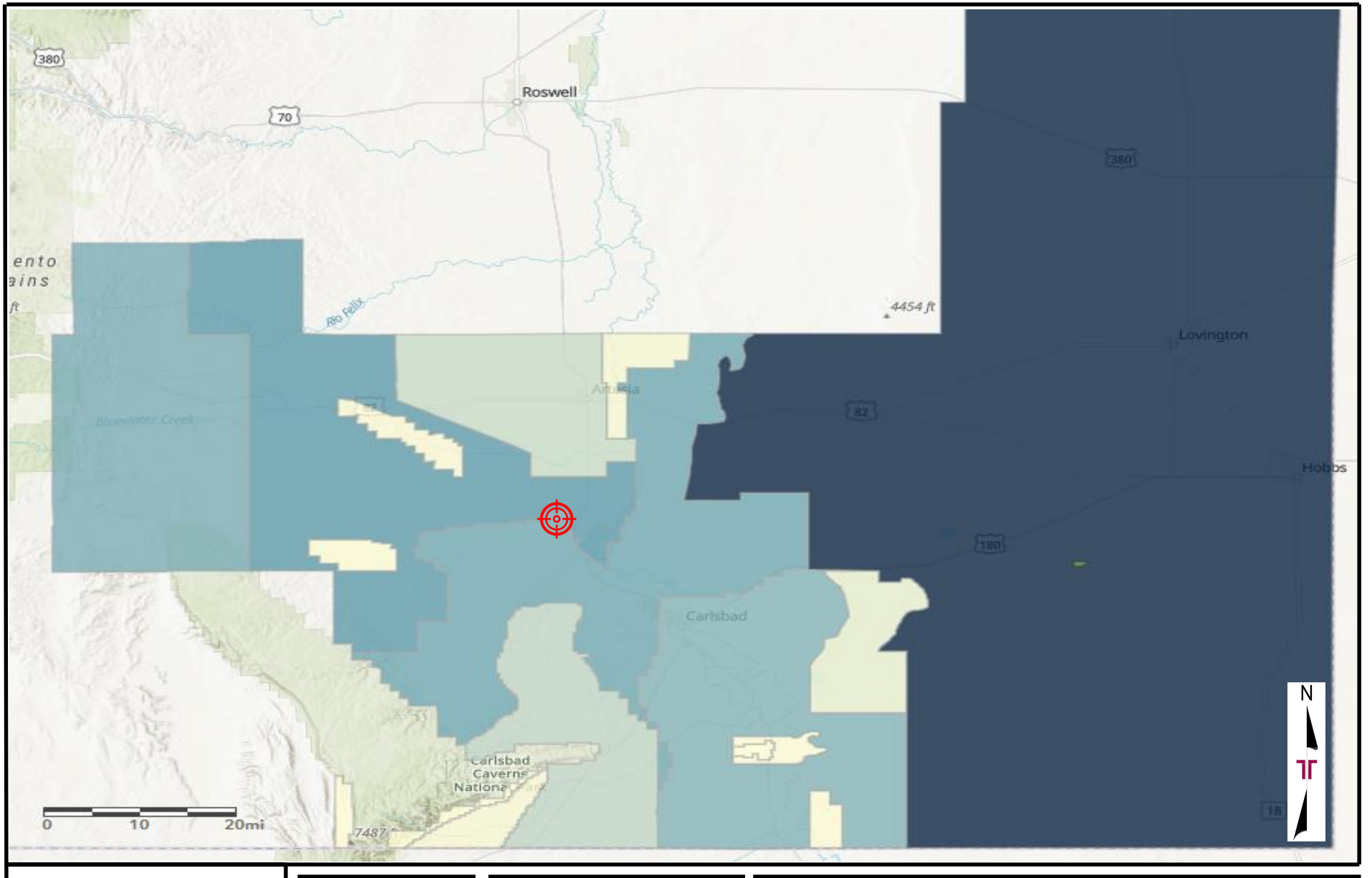
1:36,112

0 0.38 0.75 1.5 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



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

Lakewood Federal #1

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

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

Figure 6 - Cave Karst Public UCP

Lakewood Federal #1

32.6114693°, -104.470482°

Eddy County, New Mexico

TABLE 2
SOIL SAMPLE ANALYTICAL RESULTS - BTEX[1], Chloride[2], and TPH[3]
Lakewood Federal #1
NMOCD Incident No.
Terracon Project No. AR197257

Sample I.D.	Sample Depth (bgs)	Sample Type	Sample Date	BTEX (mg/kg)	Chloride (mg/kg)	TPH (8015M) (mg/kg)			
						GRO	DRO	MRO	TOTAL
Release Margin Samples									
HA-1 (0-.5)	0 - 0.5'	Grab	07/22/19	Benzene - 0.150 Toluene - 1.64 Ethylbenzene - 1.13 Total Xylenes - 2.3 Total BTEX - 5.22	43.9	**10,000**	**35,000**	2,190	**47,200**
HA-1 (.5-1)	0.5 - 1'	Grab	07/22/19	Benzene - 0.266 Toluene - 1.92 Ethylbenzene - 1.03 Total Xylenes - 2.00 Total BTEX - 5.22	52.6	**12,700**	**27,500**	2,190	**42,400**
HA-1 (1.5-2)	1.5 - 2'	Grab	07/22/19	Benzene - 0.0602 Toluene - 1.20 Ethylbenzene - 1.39 Total Xylenes - 3.05 Total BTEX - 5.70	337	706	**1,870**	273	**2,850**
HA-2 (0-.5)	0 - 0.5'	Grab	07/22/19	Benzene - <0.00823 Toluene - 0.0291 Ethylbenzene - 0.0346 Total Xylenes - 0.0911 Total BTEX - 0.155	155	12	136	92.5	241
HA-2 (.5-1)	0.5 - 1'	Grab	07/22/19	Benzene - <0.00809 Toluene - 0.0215 Ethylbenzene - <0.00551 Total Xylenes - 0.0286 Total BTEX - 0.0501	112	13.3	82.9	46.7	143
HA-2 (1.5-2)	1.5 - 2'	Grab	07/22/19	Benzene - 0.0511 Toluene - 0.0629 Ethylbenzene - 0.0196 Total Xylenes - 0.0236 Total BTEX - 0.157	409	<9.94	<9.94	<9.94	<9.94
HA-3 (0-.5)	0 - 0.5'	Grab	07/22/19	Benzene - <0.00834 Toluene - 0.0923 Ethylbenzene - 0.0904 Total Xylenes - 0.184 Total BTEX - 0.367	2,910	17.5	110	40.7	168
HA-3 (.5-1)	0.5 - 1'	Grab	07/22/19	Benzene - <0.00858 Toluene - <0.00444 Ethylbenzene - <0.00584 Total Xylenes - <0.00647 Total BTEX - <0.00444	862	<9.90	<9.90	<9.90	<9.90
HA-3 (1.5-2)	1.5 - 2'	Grab	07/22/19	Benzene - <0.00864 Toluene - <0.00447 Ethylbenzene - <0.00589 Total Xylenes - <0.00652 Total BTEX - <0.00447	818	<9.91	<9.91	<9.91	<9.91
HA-3 (3.5-4)	3.5 - 4'	Grab	07/22/19	Benzene - <0.00899 Toluene - <0.00465 Ethylbenzene - <0.00612 Total Xylenes - <0.00678 Total BTEX - <0.00465	571	<9.87	<9.87	<9.87	<9.87
New Mexico Oil Conservation Division (NMOCD) Remediation and Delineation Standards*				**Benzene - 10** **Toluene - N/A** **Ethylbenzene - N/A** **Total Xylenes - N/A** **Total BTEX - 50**	**20,000**	**1,000**		**N/A**	**2,500**

1. BTEX = Benzene, toluene, ethylbenzene, total xylenes analyzed by EPA Method 8021B
2. Chloride = Chloride analyzed by EPA Method 300.
3. TPH = Total petroleum hydrocarbons analyzed by EPA Method 8015M (GRO/DRO/ORO)
* = 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= No Applicable reporting standards
Bold denotes concentrations that exceed the New Mexico Oil Conservation Division (NMOCD) Remediation and Delineation Standards.

TABLE 2
SOIL SAMPLE ANALYTICAL RESULTS - BTEX[1], Chloride[2], and TPH[3]
Lakewood Federal #1
NMOCD Incident No.
Terracon Project No. AR197257

Sample I.D.	Sample Depth (bgs)	Sample Type	Sample Date	BTEX (mg/kg)	Chloride (mg/kg)	TPH (8015M) (mg/kg)			
						GRO	DRO	MRO	TOTAL
Confirmation Samples									
CS-2.1 (0-0.5)	0 - 0.5'	Composite	10/10/19	Benzene - <0.00904 Toluene - 0.006 Ethylbenzene - <0.00616 Total Xylenes - <0.00682 Total BTEX - 0.006	162	12.3	115	74.4	202
SP-1.1 (1.5-2)	1.5 - 2'	Composite	10/10/19	Benzene - <0.00904 Toluene - <0.00468 Ethylbenzene - 0.08 Total Xylenes - 0.226 Total BTEX - 0.306	450	114	**3,260**	459	**3,830**
CS-1.1 (2.5-3)	2.5 - 3'	Composite	10/10/19	Benzene - <0.00904 Toluene - <0.00468 Ethylbenzene - <0.00616 Total Xylenes - <0.00682 Total BTEX - <0.00468	2.88	14.2	431	85.4	531
New Mexico Oil Conservation Division (NMOCD) Remediation and Delineation Standards*				**Benzene - 10** **Toluene - N/A** **Ethylbenzene - N/A** **Total Xylenes - N/A** **Total BTEX - 50**	**20,000**	**1,000**		**N/A**	**2,500**

1. BTEX = Benzene, toluene, ethylbenzene, total xylenes analyzed by EPA Method 8021B
2. Chloride = Chloride analyzed by EPA Method 300.
3. TPH = Total petroleum hydrocarbons analyzed by EPA Method 8015M (GRO/DRO/ORO)
* = 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= No Applicable reporting standards
Bold denotes concentrations that exceed the New Mexico Oil Conservation Division (NMOCD) Remediation and Delineation Standards.

APPENDIX B – PHOTOGRAPHIC LOG

PHOTO 1: View of site, facing southeast. 7/25/2019

PHOTO 2: View of site, facing east. 7/25/2019

PHOTO 3: View of site sign, facing west. 7/25/2019

PHOTO 4: View of site, facing southwest. 7/25/2019

PHOTO 5: View of site, facing northeast. 7/25/2019

PHOTO 6: View of HA-1, facing west. 7/25/2019

PHOTO 7: View of HA-3, facing southeast. 7/25/2019

PHOTO 8: View of HA-2, facing northeast. 7/25/2019

PHOTO 9: View of remediation, facing northwest. 10/10/2019

PHOTO 10: View of remediation, facing east. 10/10/2019

PHOTO 11: View of remediation, facing southwest. 10/10/2019

PHOTO 12: View of stockpile, facing east. 10/10/2019

PHOTO 13: View of excavation, facing north. 10/10/2019

APPENDIX C – ANALYTICAL REPORT AND CHAIN OF CUSTODY

Certificate of Analysis Summary 631985

Terracon-Lubbock, Lubbock, TX

Project Name: Lakewood Federal #1

Project Id: AR197XXX
Contact: John Fergerson
Project Location:

Date Received in Lab: Wed Jul-24-19 12:34 pm
Report Date: 06-AUG-19
Project Manager: Jessica Kramer

Analysis Requested		631985-001		631985-002		631985-003		631985-004		631985-005		631985-006	
	Lab Id:	631985-001		631985-002		631985-003		631985-004		631985-005		631985-006	
	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:	Jul-22-19 13:00		Jul-22-19 13:05		Jul-22-19 13:10		Jul-22-19 13:15		Jul-22-19 13:20		Jul-22-19 13:25	
BTEX by EPA 8021B	***Extracted:***	Jul-26-19 13:00		Jul-26-19 13:00		Jul-26-19 13:00		Jul-26-19 13:00		Jul-26-19 13:00		Jul-25-19 14:05	
	Analyzed:	Jul-26-19 20:47		Jul-26-19 21:14		Jul-26-19 21:41		Jul-26-19 22:08		Jul-26-19 22:35		Jul-25-19 22:23	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		0.150	0.0183	0.266	0.0181	0.0602	0.0177	<0.00823	0.0182	<0.00809	0.0179	0.0511	0.0196
Toluene		1.64	0.0183	1.92	0.0181	1.20	0.0177	0.0291	0.0182	0.0215	0.0179	0.0629	0.0196
Ethylbenzene		1.13	0.0183	1.03	0.0181	1.39	0.0177	0.0346	0.0182	<0.00551	0.0179	0.0196 J	0.0196
m,p-Xylenes		1.62	0.0366	1.43	0.0362	2.19	0.0354	0.0747	0.0364	0.0286 J	0.0358	0.0236 J	0.0393
o-Xylene		0.683	0.0183	0.570	0.0181	0.858	0.0177	0.0164 J	0.0182	<0.00610	0.0179	<0.00670	0.0196
Total Xylenes		2.30	0.0183	2.00	0.0181	3.05	0.0177	0.0911	0.0182	0.0286	0.0179	0.0236	0.0196
Total BTEX		5.22	0.0183	5.22	0.0181	5.70	0.0177	0.155	0.0182	0.0501	0.0179	0.157	0.0196
Chloride by EPA 300 SUB: T104704215-19-29	***Extracted:***	Jul-25-19 12:04		Jul-25-19 12:04		Jul-25-19 12:04		Jul-25-19 12:04		Jul-25-19 12:04		Jul-25-19 12:04	
	Analyzed:	Jul-25-19 21:15		Jul-25-19 21:27		Jul-25-19 21:39		Jul-25-19 21:51		Jul-25-19 22:03		Jul-25-19 22:15	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		43.9	9.96	52.6	9.94	337	9.98	155	9.88	112	10.0	409	9.94
TPH By SW8015 Mod SUB: T104704215-19-29	***Extracted:***	Jul-31-19 15:45		Jul-31-19 15:48		Jul-31-19 15:51		Jul-31-19 15:54		Jul-31-19 15:57		Jul-31-19 16:00	
	Analyzed:	Aug-01-19 03:53		Aug-01-19 04:12		Aug-01-19 04:30		Aug-01-19 04:49		Aug-05-19 17:21		Aug-01-19 05:46	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		10000	49.7	12700	50.0	706	50.0	12.0 J	49.8	13.3 J	49.8	<9.94	49.7
Diesel Range Organics (DRO)		35000 D	497	27500 D	500	1870	50.0	136	49.8	82.9	49.8	<9.94	49.7
Motor Oil Range Hydrocarbons (MRO)		2190	49.7	2190	50.0	273	50.0	92.5	49.8	46.7 J	49.8	<9.94	49.7
Total TPH		47200	49.7	42400	50.0	2850	50.0	241	49.8	143	49.8	<9.94	49.7

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

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 631985

Terracon-Lubbock, Lubbock, TX

Project Name: Lakewood Federal #1

Project Id: AR197XXX
Contact: John Fergerson
Project Location:

Date Received in Lab: Wed Jul-24-19 12:34 pm
Report Date: 06-AUG-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	631985-007		631985-008		631985-009		631985-010					
	Field Id:	HA-3 (0-0.5)		HA-3 (0.5-1)		HA-3 (1.5-2)		HA-3 (3.5-4)					
	Depth:	0-0.5 ft		0.5-1 ft		1.5-2 ft		3.5-4 ft					
	Matrix:	SOIL		SOIL		SOIL		SOIL					
	Sampled:	Jul-22-19 13:30		Jul-22-19 13:35		Jul-22-19 13:40		Jul-22-19 13:45					
BTEX by EPA 8021B	***Extracted:***	Jul-26-19 13:00		Jul-25-19 14:05		Jul-25-19 14:05		Jul-25-19 14:05					
	Analyzed:	Jul-26-19 18:59		Jul-25-19 22:47		Jul-25-19 23:11		Jul-25-19 23:36					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00834	0.0185	<0.00858	0.0190	<0.00864	0.0191	<0.00899	0.0199				
Toluene		0.0923	0.0185	<0.00444	0.0190	<0.00447	0.0191	<0.00465	0.0199				
Ethylbenzene		0.0904	0.0185	<0.00584	0.0190	<0.00589	0.0191	<0.00612	0.0199				
m,p-Xylenes		0.138	0.0369	<0.00647	0.0380	<0.00652	0.0382	<0.00678	0.0398				
o-Xylene		0.0461	0.0185	<0.00647	0.0190	<0.00652	0.0191	<0.00678	0.0199				
Total Xylenes		0.184	0.0185	<0.00647	0.0190	<0.00652	0.0191	<0.00678	0.0199				
Total BTEX		0.367	0.0185	<0.00444	0.0190	<0.00447	0.0191	<0.00465	0.0199				
Chloride by EPA 300 **SUB: T104704215-19-29**	***Extracted:***	Jul-25-19 12:04		Jul-25-19 12:04		Jul-25-19 12:04		Jul-25-19 12:04					
	Analyzed:	Jul-25-19 22:27		Jul-25-19 22:39		Jul-25-19 22:51		Jul-25-19 23:27					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		2910	10.0	862	10.0	818	9.92	571	9.90				
TPH By SW8015 Mod **SUB: T104704215-19-29**	***Extracted:***	Jul-31-19 16:03		Jul-31-19 16:06		Jul-31-19 16:09		Jul-31-19 16:12					
	Analyzed:	Aug-01-19 06:05		Aug-01-19 06:24		Aug-01-19 06:42		Aug-01-19 07:01					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		17.5 J	49.8	<9.90	49.5	<9.91	49.6	<9.87	49.4				
Diesel Range Organics (DRO)		110	49.8	<9.90	49.5	<9.91	49.6	<9.87	49.4				
Motor Oil Range Hydrocarbons (MRO)		40.7 J	49.8	<9.90	49.5	<9.91	49.6	<9.87	49.4				
Total TPH		168	49.8	<9.90	49.5	<9.91	49.6	<9.87	49.4				

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

Version: 1.%

Jessica Kramer
Project Assistant

Analytical Report 631985

for

Terracon-Lubbock

Project Manager: John Fergerson

Lakewood Federal #1

AR197XXX

06-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)

06-AUG-19

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

Reference: XENCO Report No(s): **631985**
Lakewood Federal #1
Project Address:

John Fergerson:

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) 631985. 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. 631985 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 631985

Terracon-Lubbock, Lubbock, TX

Lakewood Federal #1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
HA-1 (0-0.5)	S	07-22-19 13:00	0 - 0.5 ft	631985-001
HA-1 (0.5-1)	S	07-22-19 13:05	0.5 - 1 ft	631985-002
HA-1 (1.5-2)	S	07-22-19 13:10	1.5 - 2 ft	631985-003
HA-2 (0-0.5)	S	07-22-19 13:15	0 - 0.5 ft	631985-004
HA-2 (0.5-1)	S	07-22-19 13:20	0.5 - 1 ft	631985-005
HA-2 (1.5-2)	S	07-22-19 13:25	1.5 - 2 ft	631985-006
HA-3 (0-0.5)	S	07-22-19 13:30	0 - 0.5 ft	631985-007
HA-3 (0.5-1)	S	07-22-19 13:35	0.5 - 1 ft	631985-008
HA-3 (1.5-2)	S	07-22-19 13:40	1.5 - 2 ft	631985-009
HA-3 (3.5-4)	S	07-22-19 13:45	3.5 - 4 ft	631985-010

CASE NARRATIVE

Client Name: Terracon-Lubbock
Project Name: Lakewood Federal #1

Project ID: *AR197XXX*
Work Order Number(s): *631985*

Report Date: *06-AUG-19*
Date Received: *07/24/2019*

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

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3096550 Benzene By EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3096717 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analytical Results 631985

Terracon-Lubbock, Lubbock, TX

Lakewood Federal #1

Sample Id:	**HA-1 (0-0.5)**	Matrix:	Soil	Date Received:	07.24.19 12.34
Lab Sample Id:	631985-001	Date Collected:	07.22.19 13.00	Sample Depth:	0 - 0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	07.25.19 12.04	Basis:	Wet Weight
Seq Number:	3096506			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**43.9**	9.96	0.353	mg/kg	07.25.19 21.15		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ISU			% Moisture:	
Analyst:	ISU	Date Prep:	07.31.19 15.45	Basis:	Wet Weight
Seq Number:	3097314			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**10000**	49.7	9.93	mg/kg	08.01.19 03.53		1
Diesel Range Organics (DRO)	C10C28DRO	**35000**	497	99.3	mg/kg	08.02.19 17.06	D	10
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**2190**	49.7	9.93	mg/kg	08.01.19 03.53		1
Total TPH	PHC635	**47200**	49.7	9.93	mg/kg	08.02.19 17.06		10

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	78	%	70-135	08.01.19 03.53	
o-Terphenyl	84-15-1	116	%	70-135	08.01.19 03.53	

Certificate of Analytical Results 631985

Terracon-Lubbock, Lubbock, TX

Lakewood Federal #1

Sample Id:	**HA-1 (0-0.5)**	Matrix:	Soil	Date Received:	07.24.19 12.34
Lab Sample Id:	631985-001	Date Collected:	07.22.19 13.00	Sample Depth:	0 - 0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	07.26.19 13.00	Basis:	Wet Weight
Seq Number:	3096717				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.150**	0.0183	0.00828	mg/kg	07.26.19 20.47		1
Toluene	108-88-3	**1.64**	0.0183	0.00429	mg/kg	07.26.19 20.47		1
Ethylbenzene	100-41-4	**1.13**	0.0183	0.00564	mg/kg	07.26.19 20.47		1
m,p-Xylenes	179601-23-1	**1.62**	0.0366	0.00625	mg/kg	07.26.19 20.47		1
o-Xylene	95-47-6	**0.683**	0.0183	0.00625	mg/kg	07.26.19 20.47		1
Total Xylenes	1330-20-7	**2.30**	0.0183	0.00625	mg/kg	07.26.19 20.47		1
Total BTEX		**5.22**	0.0183	0.00429	mg/kg	07.26.19 20.47		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	94	%	68-120	07.26.19 20.47	
a,a,a-Trifluorotoluene	98-08-8	85	%	71-121	07.26.19 20.47	

Certificate of Analytical Results 631985

Terracon-Lubbock, Lubbock, TX

Lakewood Federal #1

Sample Id:	**HA-1 (0.5-1)**	Matrix:	Soil	Date Received:	07.24.19 12.34
Lab Sample Id:	631985-002	Date Collected:	07.22.19 13.05	Sample Depth:	0.5 - 1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	07.25.19 12.04	Basis:	Wet Weight
Seq Number:	3096506			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**52.6**	9.94	0.352	mg/kg	07.25.19 21.27		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ISU			% Moisture:	
Analyst:	ISU	Date Prep:	07.31.19 15.48	Basis:	Wet Weight
Seq Number:	3097314			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**12700**	50.0	10.0	mg/kg	08.01.19 04.12		1
Diesel Range Organics (DRO)	C10C28DRO	**27500**	500	100	mg/kg	08.02.19 17.25	D	10
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**2190**	50.0	10.0	mg/kg	08.01.19 04.12		1
Total TPH	PHC635	**42400**	50.0	10.0	mg/kg	08.02.19 17.25		10

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	75	%	70-135	08.01.19 04.12	
o-Terphenyl	84-15-1	106	%	70-135	08.01.19 04.12	

Certificate of Analytical Results 631985

Terracon-Lubbock, Lubbock, TX

Lakewood Federal #1

Sample Id:	**HA-1 (0.5-1)**	Matrix:	Soil	Date Received:	07.24.19 12.34
Lab Sample Id:	631985-002	Date Collected:	07.22.19 13.05	Sample Depth:	0.5 - 1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	07.26.19 13.00	Basis:	Wet Weight
Seq Number:	3096717				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.266**	0.0181	0.00817	mg/kg	07.26.19 21.14		1
Toluene	108-88-3	**1.92**	0.0181	0.00423	mg/kg	07.26.19 21.14		1
Ethylbenzene	100-41-4	**1.03**	0.0181	0.00557	mg/kg	07.26.19 21.14		1
m,p-Xylenes	179601-23-1	**1.43**	0.0362	0.00617	mg/kg	07.26.19 21.14		1
o-Xylene	95-47-6	**0.570**	0.0181	0.00617	mg/kg	07.26.19 21.14		1
Total Xylenes	1330-20-7	**2.00**	0.0181	0.00617	mg/kg	07.26.19 21.14		1
Total BTEX		**5.22**	0.0181	0.00423	mg/kg	07.26.19 21.14		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	91	%	68-120	07.26.19 21.14	
a,a,a-Trifluorotoluene	98-08-8	86	%	71-121	07.26.19 21.14	

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Terracon-Lubbock, Lubbock, TX

Lakewood Federal #1

Sample Id:	**HA-1 (1.5-2)**	Matrix:	Soil	Date Received:	07.24.19 12.34
Lab Sample Id:	631985-003	Date Collected:	07.22.19 13.10	Sample Depth:	1.5 - 2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	07.25.19 12.04	Basis:	Wet Weight
Seq Number:	3096506			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**337**	9.98	0.353	mg/kg	07.25.19 21.39		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ISU			% Moisture:	
Analyst:	ISU	Date Prep:	07.31.19 15.51	Basis:	Wet Weight
Seq Number:	3097314			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**706**	50.0	9.99	mg/kg	08.01.19 04.30		1
Diesel Range Organics (DRO)	C10C28DRO	**1870**	50.0	9.99	mg/kg	08.01.19 04.30		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**273**	50.0	9.99	mg/kg	08.01.19 04.30		1
Total TPH	PHC635	**2850**	50.0	9.99	mg/kg	08.01.19 04.30		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-135	08.01.19 04.30	
o-Terphenyl	84-15-1	127	%	70-135	08.01.19 04.30	

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Terracon-Lubbock, Lubbock, TX

Lakewood Federal #1

Sample Id:	**HA-1 (1.5-2)**	Matrix:	Soil	Date Received:	07.24.19 12.34
Lab Sample Id:	631985-003	Date Collected:	07.22.19 13.10	Sample Depth:	1.5 - 2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	07.26.19 13.00	Basis:	Wet Weight
Seq Number:	3096717				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.0602**	0.0177	0.00800	mg/kg	07.26.19 21.41		1
Toluene	108-88-3	**1.20**	0.0177	0.00414	mg/kg	07.26.19 21.41		1
Ethylbenzene	100-41-4	**1.39**	0.0177	0.00545	mg/kg	07.26.19 21.41		1
m,p-Xylenes	179601-23-1	**2.19**	0.0354	0.00604	mg/kg	07.26.19 21.41		1
o-Xylene	95-47-6	**0.858**	0.0177	0.00604	mg/kg	07.26.19 21.41		1
Total Xylenes	1330-20-7	**3.05**	0.0177	0.00604	mg/kg	07.26.19 21.41		1
Total BTEX		**5.70**	0.0177	0.00414	mg/kg	07.26.19 21.41		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	89	%	68-120	07.26.19 21.41	
a,a,a-Trifluorotoluene	98-08-8	95	%	71-121	07.26.19 21.41	

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Terracon-Lubbock, Lubbock, TX

Lakewood Federal #1

Sample Id:	**HA-2 (0-0.5)**	Matrix:	Soil	Date Received:	07.24.19 12.34
Lab Sample Id:	631985-004	Date Collected:	07.22.19 13.15	Sample Depth:	0 - 0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	07.25.19 12.04	Basis:	Wet Weight
Seq Number:	3096506			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**155**	9.88	0.350	mg/kg	07.25.19 21.51		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ISU			% Moisture:	
Analyst:	ISU	Date Prep:	07.31.19 15.54	Basis:	Wet Weight
Seq Number:	3097314			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**12.0**	49.8	9.95	mg/kg	08.01.19 04.49	J	1
Diesel Range Organics (DRO)	C10C28DRO	**136**	49.8	9.95	mg/kg	08.01.19 04.49		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**92.5**	49.8	9.95	mg/kg	08.01.19 04.49		1
Total TPH	PHC635	**241**	49.8	9.95	mg/kg	08.01.19 04.49		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	08.01.19 04.49	
o-Terphenyl	84-15-1	128	%	70-135	08.01.19 04.49	

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Terracon-Lubbock, Lubbock, TX

Lakewood Federal #1

Sample Id:	**HA-2 (0-0.5)**	Matrix:	Soil	Date Received:	07.24.19 12.34
Lab Sample Id:	631985-004	Date Collected:	07.22.19 13.15	Sample Depth:	0 - 0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	07.26.19 13.00	Basis:	Wet Weight
Seq Number:	3096717				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00823	0.0182	0.00823	mg/kg	07.26.19 22.08	U	1
Toluene	108-88-3	**0.0291**	0.0182	0.00426	mg/kg	07.26.19 22.08		1
Ethylbenzene	100-41-4	**0.0346**	0.0182	0.00561	mg/kg	07.26.19 22.08		1
m,p-Xylenes	179601-23-1	**0.0747**	0.0364	0.00621	mg/kg	07.26.19 22.08		1
o-Xylene	95-47-6	**0.0164**	0.0182	0.00621	mg/kg	07.26.19 22.08	J	1
Total Xylenes	1330-20-7	**0.0911**	0.0182	0.00621	mg/kg	07.26.19 22.08		1
Total BTEX		**0.155**	0.0182	0.00426	mg/kg	07.26.19 22.08		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	92	%	68-120	07.26.19 22.08	
a,a,a-Trifluorotoluene	98-08-8	81	%	71-121	07.26.19 22.08	

Certificate of Analytical Results 631985

Terracon-Lubbock, Lubbock, TX

Lakewood Federal #1

Sample Id:	**HA-2 (0.5-1)**	Matrix:	Soil	Date Received:	07.24.19 12.34
Lab Sample Id:	631985-005	Date Collected:	07.22.19 13.20	Sample Depth:	0.5 - 1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	07.25.19 12.04	Basis:	Wet Weight
Seq Number:	3096506			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**112**	10.0	0.355	mg/kg	07.25.19 22.03		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ISU			% Moisture:	
Analyst:	ISU	Date Prep:	07.31.19 15.57	Basis:	Wet Weight
Seq Number:	3097314			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**13.3**	49.8	9.96	mg/kg	08.05.19 17.21	J	1
Diesel Range Organics (DRO)	C10C28DRO	**82.9**	49.8	9.96	mg/kg	08.05.19 17.21		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**46.7**	49.8	9.96	mg/kg	08.05.19 17.21	J	1
Total TPH	PHC635	**143**	49.8	9.96	mg/kg	08.05.19 17.21		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	130	%	70-135	08.05.19 17.21	
o-Terphenyl	84-15-1	120	%	70-135	08.05.19 17.21	

Certificate of Analytical Results 631985

Terracon-Lubbock, Lubbock, TX

Lakewood Federal #1

Sample Id:	**HA-2 (0.5-1)**	Matrix:	Soil	Date Received:	07.24.19 12.34
Lab Sample Id:	631985-005	Date Collected:	07.22.19 13.20	Sample Depth:	0.5 - 1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	07.26.19 13.00	Basis:	Wet Weight
Seq Number:	3096717				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00809	0.0179	0.00809	mg/kg	07.26.19 22.35	U	1
Toluene	108-88-3	**0.0215**	0.0179	0.00419	mg/kg	07.26.19 22.35		1
Ethylbenzene	100-41-4	<0.00551	0.0179	0.00551	mg/kg	07.26.19 22.35	U	1
m,p-Xylenes	179601-23-1	**0.0286**	0.0358	0.00610	mg/kg	07.26.19 22.35	J	1
o-Xylene	95-47-6	<0.00610	0.0179	0.00610	mg/kg	07.26.19 22.35	U	1
Total Xylenes	1330-20-7	**0.0286**	0.0179	0.00610	mg/kg	07.26.19 22.35		1
Total BTEX		**0.0501**	0.0179	0.00419	mg/kg	07.26.19 22.35		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	94	%	68-120	07.26.19 22.35	
a,a,a-Trifluorotoluene	98-08-8	83	%	71-121	07.26.19 22.35	

Certificate of Analytical Results 631985

Terracon-Lubbock, Lubbock, TX

Lakewood Federal #1

Sample Id:	**HA-2 (1.5-2)**	Matrix:	Soil	Date Received:	07.24.19 12.34
Lab Sample Id:	631985-006	Date Collected:	07.22.19 13.25	Sample Depth:	1.5 - 2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	07.25.19 12.04	Basis:	Wet Weight
Seq Number:	3096506			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**409**	9.94	0.352	mg/kg	07.25.19 22.15		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ISU			% Moisture:	
Analyst:	ISU	Date Prep:	07.31.19 16.00	Basis:	Wet Weight
Seq Number:	3097314			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	08.01.19 05.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<9.94	49.7	9.94	mg/kg	08.01.19 05.46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<9.94	49.7	9.94	mg/kg	08.01.19 05.46	U	1
Total TPH	PHC635	<9.94	49.7	9.94	mg/kg	08.01.19 05.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	08.01.19 05.46	
o-Terphenyl	84-15-1	120	%	70-135	08.01.19 05.46	

Certificate of Analytical Results 631985

Terracon-Lubbock, Lubbock, TX

Lakewood Federal #1

Sample Id:	**HA-2 (1.5-2)**	Matrix:	Soil	Date Received:	07.24.19 12.34
Lab Sample Id:	631985-006	Date Collected:	07.22.19 13.25	Sample Depth:	1.5 - 2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	07.25.19 14.05	Basis:	Wet Weight
Seq Number:	3096550				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.0511**	0.0196	0.00888	mg/kg	07.25.19 22.23		1
Toluene	108-88-3	**0.0629**	0.0196	0.00460	mg/kg	07.25.19 22.23		1
Ethylbenzene	100-41-4	**0.0196**	0.0196	0.00605	mg/kg	07.25.19 22.23	J	1
m,p-Xylenes	179601-23-1	**0.0236**	0.0393	0.00670	mg/kg	07.25.19 22.23	J	1
o-Xylene	95-47-6	<0.00670	0.0196	0.00670	mg/kg	07.25.19 22.23	U	1
Total Xylenes	1330-20-7	**0.0236**	0.0196	0.00670	mg/kg	07.25.19 22.23		1
Total BTEX		**0.157**	0.0196	0.00460	mg/kg	07.25.19 22.23		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	68-120	07.25.19 22.23	
a,a,a-Trifluorotoluene	98-08-8	113	%	71-121	07.25.19 22.23	

Certificate of Analytical Results 631985

Terracon-Lubbock, Lubbock, TX

Lakewood Federal #1

Sample Id:	**HA-3 (0-0.5)**	Matrix:	Soil	Date Received:	07.24.19 12.34
Lab Sample Id:	631985-007	Date Collected:	07.22.19 13.30	Sample Depth:	0 - 0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	07.25.19 12.04	Basis:	Wet Weight
Seq Number:	3096506			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2910**	10.0	0.355	mg/kg	07.25.19 22.27		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ISU			% Moisture:	
Analyst:	ISU	Date Prep:	07.31.19 16.03	Basis:	Wet Weight
Seq Number:	3097314			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**17.5**	49.8	9.95	mg/kg	08.01.19 06.05	J	1
Diesel Range Organics (DRO)	C10C28DRO	**110**	49.8	9.95	mg/kg	08.01.19 06.05		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**40.7**	49.8	9.95	mg/kg	08.01.19 06.05	J	1
Total TPH	PHC635	**168**	49.8	9.95	mg/kg	08.01.19 06.05		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	08.01.19 06.05	
o-Terphenyl	84-15-1	122	%	70-135	08.01.19 06.05	

Certificate of Analytical Results 631985

Terracon-Lubbock, Lubbock, TX

Lakewood Federal #1

Sample Id:	**HA-3 (0-0.5)**	Matrix:	Soil	Date Received:	07.24.19 12.34
Lab Sample Id:	631985-007	Date Collected:	07.22.19 13.30	Sample Depth:	0 - 0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	07.26.19 13.00	Basis:	Wet Weight
Seq Number:	3096717				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00834	0.0185	0.00834	mg/kg	07.26.19 18.59	U	1
Toluene	108-88-3	**0.0923**	0.0185	0.00432	mg/kg	07.26.19 18.59		1
Ethylbenzene	100-41-4	**0.0904**	0.0185	0.00568	mg/kg	07.26.19 18.59		1
m,p-Xylenes	179601-23-1	**0.138**	0.0369	0.00629	mg/kg	07.26.19 18.59		1
o-Xylene	95-47-6	**0.0461**	0.0185	0.00629	mg/kg	07.26.19 18.59		1
Total Xylenes	1330-20-7	**0.184**	0.0185	0.00629	mg/kg	07.26.19 18.59		1
Total BTEX		**0.367**	0.0185	0.00432	mg/kg	07.26.19 18.59		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	91	%	68-120	07.26.19 18.59	
a,a,a-Trifluorotoluene	98-08-8	88	%	71-121	07.26.19 18.59	

Certificate of Analytical Results 631985

Terracon-Lubbock, Lubbock, TX

Lakewood Federal #1

Sample Id:	**HA-3 (0.5-1)**	Matrix:	Soil	Date Received:	07.24.19 12.34
Lab Sample Id:	631985-008	Date Collected:	07.22.19 13.35	Sample Depth:	0.5 - 1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	07.25.19 12.04	Basis:	Wet Weight
Seq Number:	3096506			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**862**	10.0	0.355	mg/kg	07.25.19 22.39		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ISU			% Moisture:	
Analyst:	ISU	Date Prep:	07.31.19 16.06	Basis:	Wet Weight
Seq Number:	3097314			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	08.01.19 06.24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<9.90	49.5	9.90	mg/kg	08.01.19 06.24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<9.90	49.5	9.90	mg/kg	08.01.19 06.24	U	1
Total TPH	PHC635	<9.90	49.5	9.90	mg/kg	08.01.19 06.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	08.01.19 06.24	
o-Terphenyl	84-15-1	122	%	70-135	08.01.19 06.24	

Certificate of Analytical Results 631985

Terracon-Lubbock, Lubbock, TX

Lakewood Federal #1

Sample Id:	**HA-3 (0.5-1)**	Matrix:	Soil	Date Received:	07.24.19 12.34
Lab Sample Id:	631985-008	Date Collected:	07.22.19 13.35	Sample Depth:	0.5 - 1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	07.25.19 14.05	Basis:	Wet Weight
Seq Number:	3096550				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00858	0.0190	0.00858	mg/kg	07.25.19 22.47	U	1
Toluene	108-88-3	<0.00444	0.0190	0.00444	mg/kg	07.25.19 22.47	U	1
Ethylbenzene	100-41-4	<0.00584	0.0190	0.00584	mg/kg	07.25.19 22.47	U	1
m,p-Xylenes	179601-23-1	<0.00647	0.0380	0.00647	mg/kg	07.25.19 22.47	U	1
o-Xylene	95-47-6	<0.00647	0.0190	0.00647	mg/kg	07.25.19 22.47	U	1
Total Xylenes	1330-20-7	<0.00647	0.0190	0.00647	mg/kg	07.25.19 22.47	U	1
Total BTEX		<0.00444	0.0190	0.00444	mg/kg	07.25.19 22.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	99	%	68-120	07.25.19 22.47	
a,a,a-Trifluorotoluene	98-08-8	107	%	71-121	07.25.19 22.47	

Certificate of Analytical Results 631985

Terracon-Lubbock, Lubbock, TX

Lakewood Federal #1

Sample Id:	**HA-3 (1.5-2)**	Matrix:	Soil	Date Received:	07.24.19 12.34
Lab Sample Id:	631985-009	Date Collected:	07.22.19 13.40	Sample Depth:	1.5 - 2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	07.25.19 12.04	Basis:	Wet Weight
Seq Number:	3096506			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**818**	9.92	0.351	mg/kg	07.25.19 22.51		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ISU			% Moisture:	
Analyst:	ISU	Date Prep:	07.31.19 16.09	Basis:	Wet Weight
Seq Number:	3097314			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.91	49.6	9.91	mg/kg	08.01.19 06.42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<9.91	49.6	9.91	mg/kg	08.01.19 06.42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<9.91	49.6	9.91	mg/kg	08.01.19 06.42	U	1
Total TPH	PHC635	<9.91	49.6	9.91	mg/kg	08.01.19 06.42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	08.01.19 06.42	
o-Terphenyl	84-15-1	121	%	70-135	08.01.19 06.42	

Certificate of Analytical Results 631985

Terracon-Lubbock, Lubbock, TX

Lakewood Federal #1

Sample Id:	**HA-3 (1.5-2)**	Matrix:	Soil	Date Received:	07.24.19 12.34
Lab Sample Id:	631985-009	Date Collected:	07.22.19 13.40	Sample Depth:	1.5 - 2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	07.25.19 14.05	Basis:	Wet Weight
Seq Number:	3096550				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00864	0.0191	0.00864	mg/kg	07.25.19 23.11	U	1
Toluene	108-88-3	<0.00447	0.0191	0.00447	mg/kg	07.25.19 23.11	U	1
Ethylbenzene	100-41-4	<0.00589	0.0191	0.00589	mg/kg	07.25.19 23.11	U	1
m,p-Xylenes	179601-23-1	<0.00652	0.0382	0.00652	mg/kg	07.25.19 23.11	U	1
o-Xylene	95-47-6	<0.00652	0.0191	0.00652	mg/kg	07.25.19 23.11	U	1
Total Xylenes	1330-20-7	<0.00652	0.0191	0.00652	mg/kg	07.25.19 23.11	U	1
Total BTEX		<0.00447	0.0191	0.00447	mg/kg	07.25.19 23.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	68-120	07.25.19 23.11	
a,a,a-Trifluorotoluene	98-08-8	114	%	71-121	07.25.19 23.11	

Certificate of Analytical Results 631985

Terracon-Lubbock, Lubbock, TX

Lakewood Federal #1

Sample Id:	**HA-3 (3.5-4)**	Matrix:	Soil	Date Received:	07.24.19 12.34
Lab Sample Id:	631985-010	Date Collected:	07.22.19 13.45	Sample Depth:	3.5 - 4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	07.25.19 12.04	Basis:	Wet Weight
Seq Number:	3096506			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**571**	9.90	0.350	mg/kg	07.25.19 23.27		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ISU			% Moisture:	
Analyst:	ISU	Date Prep:	07.31.19 16.12	Basis:	Wet Weight
Seq Number:	3097314			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.87	49.4	9.87	mg/kg	08.01.19 07.01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<9.87	49.4	9.87	mg/kg	08.01.19 07.01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<9.87	49.4	9.87	mg/kg	08.01.19 07.01	U	1
Total TPH	PHC635	<9.87	49.4	9.87	mg/kg	08.01.19 07.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	08.01.19 07.01	
o-Terphenyl	84-15-1	121	%	70-135	08.01.19 07.01	

Certificate of Analytical Results 631985

Terracon-Lubbock, Lubbock, TX

Lakewood Federal #1

Sample Id:	**HA-3 (3.5-4)**	Matrix:	Soil	Date Received:	07.24.19 12.34
Lab Sample Id:	631985-010	Date Collected:	07.22.19 13.45	Sample Depth:	3.5 - 4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	07.25.19 14.05	Basis:	Wet Weight
Seq Number:	3096550				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00899	0.0199	0.00899	mg/kg	07.25.19 23.36	U	1
Toluene	108-88-3	<0.00465	0.0199	0.00465	mg/kg	07.25.19 23.36	U	1
Ethylbenzene	100-41-4	<0.00612	0.0199	0.00612	mg/kg	07.25.19 23.36	U	1
m,p-Xylenes	179601-23-1	<0.00678	0.0398	0.00678	mg/kg	07.25.19 23.36	U	1
o-Xylene	95-47-6	<0.00678	0.0199	0.00678	mg/kg	07.25.19 23.36	U	1
Total Xylenes	1330-20-7	<0.00678	0.0199	0.00678	mg/kg	07.25.19 23.36	U	1
Total BTEX		<0.00465	0.0199	0.00465	mg/kg	07.25.19 23.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	68-120	07.25.19 23.36	
a,a,a-Trifluorotoluene	98-08-8	111	%	71-121	07.25.19 23.36	

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 631985

Terracon-Lubbock

Lakewood Federal #1

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3096506 — Matrix: Solid — Date Prep: 07.25.19
MB Sample Id: 7682764-1-BLK — LCS Sample Id: 7682764-1-BKS — LCSD Sample Id: 7682764-1-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	103	103	102	102	80-120	1	20	mg/kg	07.25.19 18:51	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3096506 — Matrix: Soil — Date Prep: 07.25.19
Parent Sample Id: 631980-001 — MS Sample Id: 631980-001 S — MSD Sample Id: 631980-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2770	99.8	2840	70	2850	80	80-120	0	20	mg/kg	07.25.19 19:27	X

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3096506 — Matrix: Soil — Date Prep: 07.25.19
Parent Sample Id: 631980-002 — MS Sample Id: 631980-002 S — MSD Sample Id: 631980-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2220	99.8	2310	90	2300	80	80-120	0	20	mg/kg	07.25.19 20:03	

Analytical Method: TPH By SW8015 Mod — Prep Method: TX1005P
Seq Number: 3097314 — Matrix: Solid — Date Prep: 07.31.19
MB Sample Id: 7683241-1-BLK — LCS Sample Id: 7683241-1-BKS — LCSD Sample Id: 7683241-1-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	1060	106	1080	108	70-135	2	35	mg/kg	07.31.19 23:11	
Diesel Range Organics (DRO)	<10.0	1000	1140	114	1180	118	70-135	3	35	mg/kg	07.31.19 23:11	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	102		111		112		70-135	%	07.31.19 23:11
o-Terphenyl	122		115		116		70-135	%	07.31.19 23:11

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 631985

Terracon-Lubbock

Lakewood Federal #1

Analytical Method: TPH By SW8015 Mod | Prep Method: TX1005P
Seq Number: 3097314 | Matrix: Soil | Date Prep: 07.31.19
Parent Sample Id: 631951-040 | MS Sample Id: 631951-040 S | MSD Sample Id: 631951-040 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<10.0	1000	1070	107	1020	102	70-135	5	35	mg/kg	08.01.19 00:25	
Diesel Range Organics (DRO)	<10.0	1000	1160	116	1120	112	70-135	4	35	mg/kg	08.01.19 00:25	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	106		104		70-135	%	08.01.19 00:25
o-Terphenyl	105		104		70-135	%	08.01.19 00:25

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3096550 | Matrix: Solid | Date Prep: 07.25.19
MB Sample Id: 7682863-1-BLK | LCS Sample Id: 7682863-1-BKS | LCSD Sample Id: 7682863-1-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	1.90	95	1.88	94	55-120	1	20	mg/kg	07.25.19 17:33	
Toluene	<0.00468	2.00	1.88	94	1.87	94	77-120	1	20	mg/kg	07.25.19 17:33	
Ethylbenzene	<0.00616	2.00	2.00	100	2.02	101	77-120	1	20	mg/kg	07.25.19 17:33	
m,p-Xylenes	<0.00682	4.00	3.94	99	3.95	99	78-120	0	20	mg/kg	07.25.19 17:33	
o-Xylene	<0.00682	2.00	2.01	101	2.02	101	78-120	0	20	mg/kg	07.25.19 17:33	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	92		98		95		68-120	%	07.25.19 17:33
a,a,a-Trifluorotoluene	99		105		102		71-121	%	07.25.19 17:33

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3096717 | Matrix: Solid | Date Prep: 07.26.19
MB Sample Id: 7682998-1-BLK | LCS Sample Id: 7682998-1-BKS | LCSD Sample Id: 7682998-1-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	1.75	88	1.91	96	55-120	9	20	mg/kg	07.26.19 16:44	
Toluene	<0.00468	2.00	1.86	93	1.87	94	77-120	1	20	mg/kg	07.26.19 16:44	
Ethylbenzene	<0.00616	2.00	1.89	95	1.90	95	77-120	1	20	mg/kg	07.26.19 16:44	
m,p-Xylenes	<0.00682	4.00	3.78	95	3.79	95	78-120	0	20	mg/kg	07.26.19 16:44	
o-Xylene	<0.00682	2.00	1.89	95	1.91	96	78-120	1	20	mg/kg	07.26.19 16:44	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	93		87		87		68-120	%	07.26.19 16:44
a,a,a-Trifluorotoluene	88		78		82		71-121	%	07.26.19 16:44

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 631985

Terracon-Lubbock

Lakewood Federal #1

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

Seq Number: 3096550 Matrix: Soil Date Prep: 07.25.19

Parent Sample Id: 631980-001 MS Sample Id: 631980-001 S MSD Sample Id: 631980-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00897	1.98	1.79	90	1.86	93	54-120	4	25	mg/kg	07.25.19 19:58	
Toluene	<0.00464	1.98	1.69	85	1.80	90	57-120	6	25	mg/kg	07.25.19 19:58	
Ethylbenzene	<0.00611	1.98	1.75	88	1.87	94	58-131	7	25	mg/kg	07.25.19 19:58	
m,p-Xylenes	<0.00677	3.97	3.48	88	3.73	93	62-124	7	25	mg/kg	07.25.19 19:58	
o-Xylene	<0.00677	1.98	1.79	90	1.90	95	62-124	6	25	mg/kg	07.25.19 19:58	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	86		90		68-120	%	07.25.19 19:58
a,a,a-Trifluorotoluene	103		108		71-121	%	07.25.19 19:58

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

Seq Number: 3096717 Matrix: Soil Date Prep: 07.26.19

Parent Sample Id: 631985-007 MS Sample Id: 631985-007 S MSD Sample Id: 631985-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00876	1.94	1.60	82	1.45	80	54-120	10	25	mg/kg	07.26.19 19:26	
Toluene	0.0923	1.94	1.82	89	1.63	85	57-120	11	25	mg/kg	07.26.19 19:26	
Ethylbenzene	0.0904	1.94	1.86	91	1.66	87	58-131	11	25	mg/kg	07.26.19 19:26	
m,p-Xylenes	0.138	3.88	3.68	91	3.25	86	62-124	12	25	mg/kg	07.26.19 19:26	
o-Xylene	0.0461	1.94	1.80	90	1.51	81	62-124	18	25	mg/kg	07.26.19 19:26	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	95		92		68-120	%	07.26.19 19:26
a,a,a-Trifluorotoluene	82		81		71-121	%	07.26.19 19:26

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

631985

631985

Terracon

CHAIN OF CUSTODY RECORD

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

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

Project Number: AR197XXX
Project Name: Lakewood Federal #1

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE:

TEMP OF COOLER WHEN RECEIVED (°C): 1.9/2.1 FR-3 +0.2

Page ____ of ___

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	7/22/2019	13:00		X	HA-1 (0-0.5)	0'	0.5'	X				X	X	X					1
S	7/22/2019	13:05		X	HA-1 (0.5-1)	0.5'	1'	X				X	X	X					2
S	7/22/2019	13:10		X	HA-1 (1.5-2)	1.5'	2'	X				X	X	X					3
S	7/22/2019	13:15		X	HA-2 (0-0.5)	0'	0.5'	X				X	X	X					4
S	7/22/2019	13:20		X	HA-2 (0.5-1)	0.5'	1'	X				X	X	X					5
S	7/22/2019	13:25		X	HA-2 (1.5-2)	1.5'	2'	X							X				6
S	7/22/2019	13:30		X	HA-3 (0-0.5)	0'	0.5'	X				X	X	X					7
S	7/22/2019	13:35		X	HA-3 (0.5-1)	0.5'	1'	X				X	X	X					8
S	7/22/2019	13:40		X	HA-3 (1.5-2)	1.5'	2'	X				X	X	X					9
S	7/22/2019	13:45		X	HA-3 (3.5-4)	3.5'	4'	X							X				10

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

TRRP Laboratory Review Checklist ☐ Yes ☐ No

	Date:	Time:		Date:	Time:
Relinquished by (Signature)	7-24-19	12:34	Received by (Signature) Brenda Ward	7/24/19	12:34
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 _____

Inter-Office Shipment

IOS Number : 44917

Date/Time:	07.24.2019 16:26	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.:	775827605482	E-Mail:	jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
631985-001	S	HA-1 (0-0.5)	07.22.2019 13:00	E300_CL	Chloride by EPA 300	07.30.2019	01.18.2020	JKR	CL	
631985-001	S	HA-1 (0-0.5)	07.22.2019 13:00	SW8015MOD_NM	TPH By SW8015 Mod	07.30.2019	08.05.2019	JKR	PHCC10C28 PHCC28C3	
631985-002	S	HA-1 (0.5-1)	07.22.2019 13:05	E300_CL	Chloride by EPA 300	07.30.2019	01.18.2020	JKR	CL	
631985-002	S	HA-1 (0.5-1)	07.22.2019 13:05	SW8015MOD_NM	TPH By SW8015 Mod	07.30.2019	08.05.2019	JKR	PHCC10C28 PHCC28C3	
631985-003	S	HA-1 (1.5-2)	07.22.2019 13:10	E300_CL	Chloride by EPA 300	07.30.2019	01.18.2020	JKR	CL	
631985-003	S	HA-1 (1.5-2)	07.22.2019 13:10	SW8015MOD_NM	TPH By SW8015 Mod	07.30.2019	08.05.2019	JKR	PHCC10C28 PHCC28C3	
631985-004	S	HA-2 (0-0.5)	07.22.2019 13:15	E300_CL	Chloride by EPA 300	07.30.2019	01.18.2020	JKR	CL	
631985-004	S	HA-2 (0-0.5)	07.22.2019 13:15	SW8015MOD_NM	TPH By SW8015 Mod	07.30.2019	08.05.2019	JKR	PHCC10C28 PHCC28C3	
631985-005	S	HA-2 (0.5-1)	07.22.2019 13:20	E300_CL	Chloride by EPA 300	07.30.2019	01.18.2020	JKR	CL	
631985-005	S	HA-2 (0.5-1)	07.22.2019 13:20	SW8015MOD_NM	TPH By SW8015 Mod	07.30.2019	08.05.2019	JKR	PHCC10C28 PHCC28C3	
631985-006	S	HA-2 (1.5-2)	07.22.2019 13:25	E300_CL	Chloride by EPA 300	07.30.2019	01.18.2020	JKR	CL	
631985-006	S	HA-2 (1.5-2)	07.22.2019 13:25	SW8015MOD_NM	TPH By SW8015 Mod	07.30.2019	08.05.2019	JKR	PHCC10C28 PHCC28C3	
631985-007	S	HA-3 (0-0.5)	07.22.2019 13:30	E300_CL	Chloride by EPA 300	07.30.2019	01.18.2020	JKR	CL	
631985-007	S	HA-3 (0-0.5)	07.22.2019 13:30	SW8015MOD_NM	TPH By SW8015 Mod	07.30.2019	08.05.2019	JKR	PHCC10C28 PHCC28C3	
631985-008	S	HA-3 (0.5-1)	07.22.2019 13:35	E300_CL	Chloride by EPA 300	07.30.2019	01.18.2020	JKR	CL	
631985-008	S	HA-3 (0.5-1)	07.22.2019 13:35	SW8015MOD_NM	TPH By SW8015 Mod	07.30.2019	08.05.2019	JKR	PHCC10C28 PHCC28C3	
631985-009	S	HA-3 (1.5-2)	07.22.2019 13:40	E300_CL	Chloride by EPA 300	07.30.2019	01.18.2020	JKR	CL	
631985-009	S	HA-3 (1.5-2)	07.22.2019 13:40	SW8015MOD_NM	TPH By SW8015 Mod	07.30.2019	08.05.2019	JKR	PHCC10C28 PHCC28C3	
631985-010	S	HA-3 (3.54)	07.22.2019 13:45	SW8015MOD_NM	TPH By SW8015 Mod	07.30.2019	08.05.2019	JKR	PHCC10C28 PHCC28C3	
631985-010	S	HA-3 (3.54)	07.22.2019 13:45	E300_CL	Chloride by EPA 300	07.30.2019	01.18.2020	JKR	CL	

Inter-Office Shipment

IOS Number : 44917

Date/Time:	07.24.2019 16:26	Created by:	Brenda Ward
Lab# From:	**Lubbock**	Delivery Priority:	
Lab# To:	**Houston**	Air Bill No.:	775827605482

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

Inter Office Shipment or Sample Comments:

Relinquished By: Brenda Ward

Brenda Ward

Date Relinquished: 07.24.2019

Received By: Travis Simmons

Travis Simmons

Date Received: 07.25.2019 09:20

Cooler Temperature: 1.3

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 44917

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:** 07.24.2019 04.26 PM

Received By: Travis Simmons **Date Received:** 07.25.2019 09.20 AM

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	1.3	
#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: Travis Simmons Date: 07.25.2019

Travis Simmons

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Terracon-Lubbock

Date/ Time Received: 07/24/2019 12:34:00 PM

Work Order #: 631985

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : IR-3

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	2.1	
#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?	**Yes**	
#9 Chain of Custody signed when relinquished/ received?	**Yes**	
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**	
#11 Container label(s) legible and intact?	**Yes**	
#12 Samples in proper container/ bottle?	**Yes**	
#13 Samples properly preserved?	**Yes**	
#14 Sample container(s) intact?	**Yes**	
#15 Sufficient sample amount for indicated test(s)?	**Yes**	
#16 All samples received within hold time?	**Yes**	
#17 Subcontract of sample(s)?	**Yes**	All test buy BTEX sent to Stafford
#18 Water VOC samples have zero headspace?	**N/A**	

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

Analyst: PH Device/Lot#:

Checklist completed by: Brenda Ward Date: 07/24/2019
Brenda Ward

Checklist reviewed by: Jessica Kramer Date: 07/25/2019
Jessica Kramer

Certificate of Analysis Summary 639685

Terracon-Lubbock, Lubbock, TX

Project Name: Spur-Lakewood Federal

Project Id: CS197046
Contact: Joseph Guesnier
Project Location:

Date Received in Lab: Thu Oct-10-19 04:30 pm
Report Date: 14-OCT-19
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	639685-001		639685-002		639685-003			
	Field Id:	CS-2.1		SP-1.1		CS-1.1			
	Depth:	0-0.5 ft		1.5-2 ft		2.5-3 ft			
	Matrix:	SOIL		SOIL		SOIL			
	Sampled:	Oct-10-19 11:40		Oct-10-19 11:45		Oct-10-19 11:50			
BTEX by EPA 8021B	***Extracted:***	Oct-11-19 10:40		Oct-11-19 10:40		Oct-11-19 10:40			
	Analyzed:	Oct-12-19 01:40		Oct-12-19 04:05		Oct-12-19 03:41			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Benzene		<0.00904	0.0200	<0.00904	0.0200	<0.00904	0.0200		
Toluene		0.00600 J	0.0200	<0.00468	0.0200	<0.00468	0.0200		
Ethylbenzene		<0.00616	0.0200	0.0800	0.0200	<0.00616	0.0200		
m,p-Xylenes		<0.00682	0.0400	0.152	0.0400	<0.00682	0.0400		
o-Xylene		<0.00682	0.0200	0.0740	0.0200	<0.00682	0.0200		
Total Xylenes		<0.00682	0.0200	0.226	0.0200	<0.00682	0.0200		
Total BTEX		0.00600 J	0.0200	0.306	0.0200	<0.00468	0.0200		
Chloride by EPA 300	***Extracted:***	Oct-11-19 10:15		Oct-11-19 10:15		Oct-11-19 10:15			
	Analyzed:	Oct-14-19 11:28		Oct-14-19 11:40		Oct-14-19 11:53			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Chloride		162	25.0	450	125	2.88 J	25.0		
TPH By SW8015 Mod SUB: T104704215-19-30	***Extracted:***	Oct-11-19 17:39		Oct-11-19 17:48		Oct-11-19 17:51			
	Analyzed:	Oct-12-19 18:59		Oct-12-19 19:55		Oct-12-19 20:14			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Gasoline Range Hydrocarbons (GRO)		12.3 J	49.8	114	49.9	14.2 J	50.3		
Diesel Range Organics (DRO)		115	49.8	3260	49.9	431	50.3		
Motor Oil Range Hydrocarbons (MRO)		74.4	49.8	459	49.9	85.4	50.3		
Total TPH		202	49.8	3830	49.9	531	50.3		

Version: 1.%

Jessica Kramer
Project Assistant

Analytical Report 639685

for

Terracon-Lubbock

Project Manager: Joseph Guesnier

Spur-Lakewood Federal

CS197046

14-OCT-19

Collected By: Client

6701 Aberdeen, Suite 9 Lubbock, TX 79424

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

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

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

14-OCT-19

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

Reference: XENCO Report No(s): **639685**
Spur-Lakewood Federal
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) 639685. 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. 639685 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

Sample Cross Reference 639685

Terracon-Lubbock, Lubbock, TX

Spur-Lakewood Federal

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
CS-2.1	S	10-10-19 11:40	0 - 0.5 ft	639685-001
SP-1.1	S	10-10-19 11:45	1.5 - 2 ft	639685-002
CS-1.1	S	10-10-19 11:50	2.5 - 3 ft	639685-003

Version: 1.%

CASE NARRATIVE

Client Name: Terracon-Lubbock

Project Name: Spur-Lakewood Federal

Project ID: *CS197046*
Work Order Number(s): *639685*

Report Date: *14-OCT-19*
Date Received: *10/10/2019*

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-3104132 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.
Surrogate 4-Bromofluorobenzene, Surrogate a,a,a-Trifluorotoluene recovered below QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 639685-003.

Certificate of Analytical Results 639685

Terracon-Lubbock, Lubbock, TX

Spur-Lakewood Federal

Sample Id:	**CS-2.1**	Matrix:	Soil	Date Received:	10.10.19 16.30
Lab Sample Id:	639685-001	Date Collected:	10.10.19 11.40	Sample Depth:	0 - 0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	RNL			% Moisture:	
Analyst:	RNL	Date Prep:	10.11.19 10.15	Basis:	Wet Weight
Seq Number:	3104159				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**162**	25.0	0.572	mg/kg	10.14.19 11.28		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	SW8015P
Tech:	DRU			% Moisture:	
Analyst:	ISU	Date Prep:	10.11.19 17.39	Basis:	Wet Weight
Seq Number:	3104135			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**12.3**	49.8	9.96	mg/kg	10.12.19 18.59	J	1
Diesel Range Organics (DRO)	C10C28DRO	**115**	49.8	9.96	mg/kg	10.12.19 18.59		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**74.4**	49.8	9.96	mg/kg	10.12.19 18.59		1
Total TPH	PHC635	**202**	49.8	9.96	mg/kg	10.12.19 18.59		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	10.12.19 18.59	
o-Terphenyl	84-15-1	120	%	70-135	10.12.19 18.59	

Certificate of Analytical Results 639685

Terracon-Lubbock, Lubbock, TX

Spur-Lakewood Federal

Sample Id:	**CS-2.1**	Matrix:	Soil	Date Received:	10.10.19 16.30
Lab Sample Id:	639685-001	Date Collected:	10.10.19 11.40	Sample Depth:	0 - 0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	10.11.19 10.40	Basis:	Wet Weight
Seq Number:	3104132				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00904	0.0200	0.00904	mg/kg	10.12.19 01.40	U	1
Toluene	108-88-3	**0.00600**	0.0200	0.00468	mg/kg	10.12.19 01.40	J	1
Ethylbenzene	100-41-4	<0.00616	0.0200	0.00616	mg/kg	10.12.19 01.40	U	1
m,p-Xylenes	179601-23-1	<0.00682	0.0400	0.00682	mg/kg	10.12.19 01.40	U	1
o-Xylene	95-47-6	<0.00682	0.0200	0.00682	mg/kg	10.12.19 01.40	U	1
Total Xylenes	1330-20-7	<0.00682	0.0200	0.00682	mg/kg	10.12.19 01.40	U	1
Total BTEX		**0.00600**	0.0200	0.00468	mg/kg	10.12.19 01.40	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	73	%	68-120	10.12.19 01.40	
a,a,a-Trifluorotoluene	98-08-8	79	%	71-121	10.12.19 01.40	

Certificate of Analytical Results 639685

Terracon-Lubbock, Lubbock, TX

Spur-Lakewood Federal

Sample Id:	**SP-1.1**	Matrix:	Soil	Date Received:	10.10.19 16.30
Lab Sample Id:	639685-002	Date Collected:	10.10.19 11.45	Sample Depth:	1.5 - 2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	RNL			% Moisture:	
Analyst:	RNL	Date Prep:	10.11.19 10.15	Basis:	Wet Weight
Seq Number:	3104159				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**450**	125	2.86	mg/kg	10.14.19 11.40		5

Analytical Method:	TPH By SW8015 Mod			Prep Method:	SW8015P
Tech:	DRU			% Moisture:	
Analyst:	ISU	Date Prep:	10.11.19 17.48	Basis:	Wet Weight
Seq Number:	3104135			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**114**	49.9	9.97	mg/kg	10.12.19 19.55		1
Diesel Range Organics (DRO)	C10C28DRO	**3260**	49.9	9.97	mg/kg	10.12.19 19.55		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**459**	49.9	9.97	mg/kg	10.12.19 19.55		1
Total TPH	PHC635	**3830**	49.9	9.97	mg/kg	10.12.19 19.55		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	10.12.19 19.55	
o-Terphenyl	84-15-1	134	%	70-135	10.12.19 19.55	

Certificate of Analytical Results 639685

Terracon-Lubbock, Lubbock, TX

Spur-Lakewood Federal

Sample Id:	**SP-1.1**	Matrix:	Soil	Date Received:	10.10.19 16.30
Lab Sample Id:	639685-002	Date Collected:	10.10.19 11.45	Sample Depth:	1.5 - 2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	10.11.19 10.40	Basis:	Wet Weight
Seq Number:	3104132				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00904	0.0200	0.00904	mg/kg	10.12.19 04.05	U	1
Toluene	108-88-3	<0.00468	0.0200	0.00468	mg/kg	10.12.19 04.05	U	1
Ethylbenzene	100-41-4	**0.0800**	0.0200	0.00616	mg/kg	10.12.19 04.05		1
m,p-Xylenes	179601-23-1	**0.152**	0.0400	0.00682	mg/kg	10.12.19 04.05		1
o-Xylene	95-47-6	**0.0740**	0.0200	0.00682	mg/kg	10.12.19 04.05		1
Total Xylenes	1330-20-7	**0.226**	0.0200	0.00682	mg/kg	10.12.19 04.05		1
Total BTEX		**0.306**	0.0200	0.00468	mg/kg	10.12.19 04.05		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	116	%	68-120	10.12.19 04.05	
a,a,a-Trifluorotoluene	98-08-8	84	%	71-121	10.12.19 04.05	

Certificate of Analytical Results 639685

Terracon-Lubbock, Lubbock, TX

Spur-Lakewood Federal

Sample Id:	**CS-1.1**	Matrix:	Soil	Date Received:	10.10.19 16.30
Lab Sample Id:	639685-003	Date Collected:	10.10.19 11.50	Sample Depth:	2.5 - 3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	RNL			% Moisture:	
Analyst:	RNL	Date Prep:	10.11.19 10.15	Basis:	Wet Weight
Seq Number:	3104159				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2.88**	25.0	0.572	mg/kg	10.14.19 11.53	J	1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	SW8015P
Tech:	DRU			% Moisture:	
Analyst:	ISU	Date Prep:	10.11.19 17.51	Basis:	Wet Weight
Seq Number:	3104135			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**14.2**	50.3	10.1	mg/kg	10.12.19 20.14	J	1
Diesel Range Organics (DRO)	C10C28DRO	**431**	50.3	10.1	mg/kg	10.12.19 20.14		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**85.4**	50.3	10.1	mg/kg	10.12.19 20.14		1
Total TPH	PHC635	**531**	50.3	10.1	mg/kg	10.12.19 20.14		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	10.12.19 20.14	
o-Terphenyl	84-15-1	91	%	70-135	10.12.19 20.14	

Certificate of Analytical Results 639685

Terracon-Lubbock, Lubbock, TX

Spur-Lakewood Federal

Sample Id:	**CS-1.1**	Matrix:	Soil	Date Received:	10.10.19 16.30
Lab Sample Id:	639685-003	Date Collected:	10.10.19 11.50	Sample Depth:	2.5 - 3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	10.11.19 10.40	Basis:	Wet Weight
Seq Number:	3104132				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00904	0.0200	0.00904	mg/kg	10.12.19 03.41	U	1
Toluene	108-88-3	<0.00468	0.0200	0.00468	mg/kg	10.12.19 03.41	U	1
Ethylbenzene	100-41-4	<0.00616	0.0200	0.00616	mg/kg	10.12.19 03.41	U	1
m,p-Xylenes	179601-23-1	<0.00682	0.0400	0.00682	mg/kg	10.12.19 03.41	U	1
o-Xylene	95-47-6	<0.00682	0.0200	0.00682	mg/kg	10.12.19 03.41	U	1
Total Xylenes	1330-20-7	<0.00682	0.0200	0.00682	mg/kg	10.12.19 03.41	U	1
Total BTEX		<0.00468	0.0200	0.00468	mg/kg	10.12.19 03.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	60	%	68-120	10.12.19 03.41	**
a,a,a-Trifluorotoluene	98-08-8	69	%	71-121	10.12.19 03.41	**

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 639685

Terracon-Lubbock

Spur-Lakewood Federal

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3104159 Matrix: Solid Date Prep: 10.11.19
MB Sample Id: 7688023-1-BLK LCS Sample Id: 7688023-1-BKS LCSD Sample Id: 7688023-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.572	250	256	102	249	100	90-110	3	20	mg/kg	10.14.19 10:26	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3104159 Matrix: Soil Date Prep: 10.11.19
Parent Sample Id: 639679-001 MS Sample Id: 639679-001 S MSD Sample Id: 639679-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	14.8	250	268	101	273	103	80-120	2	20	mg/kg	10.14.19 11:03	

Analytical Method: **TPH By SW8015 Mod** Prep Method: SW8015P
Seq Number: 3104135 Matrix: Solid Date Prep: 10.11.19
MB Sample Id: 7687977-1-BLK LCS Sample Id: 7687977-1-BKS LCSD Sample Id: 7687977-1-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	1060	106	1020	102	70-135	4	35	mg/kg	10.12.19 18:03	
Diesel Range Organics (DRO)	<10.0	1000	1090	109	1040	104	70-135	5	35	mg/kg	10.12.19 18:03	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	106		115		111		70-135	%	10.12.19 18:03
o-Terphenyl	121		113		107		70-135	%	10.12.19 18:03

Analytical Method: **TPH By SW8015 Mod** Prep Method: SW8015P
Seq Number: 3104135 Matrix: Solid Date Prep: 10.11.19
MB Sample Id: 7687977-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<10.0	mg/kg	10.12.19 17:44	

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 639685

Terracon-Lubbock

Spur-Lakewood Federal

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3104135 — Matrix: Soil — Date Prep: 10.11.19
Parent Sample Id: 639685-001 — MS Sample Id: 639685-001 S — MSD Sample Id: 639685-001 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)	12.3	997	966	96	1000	100	70-135	3	35	mg/kg	10.12.19 19:18	
Diesel Range Organics (DRO)	115	997	1090	98	1150	104	70-135	5	35	mg/kg	10.12.19 19:18	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	107		110		70-135	%	10.12.19 19:18
o-Terphenyl	95		90		70-135	%	10.12.19 19:18

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3104132 — Matrix: Solid — Date Prep: 10.11.19
MB Sample Id: 7687946-1-BLK — LCS Sample Id: 7687946-1-BKS — LCSD Sample Id: 7687946-1-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	1.76	88	1.74	87	55-120	1	20	mg/kg	10.11.19 23:40	
Toluene	<0.00468	2.00	1.78	89	1.71	86	77-120	4	20	mg/kg	10.11.19 23:40	
Ethylbenzene	<0.00616	2.00	1.89	95	1.83	92	77-120	3	20	mg/kg	10.11.19 23:40	
m,p-Xylenes	<0.00682	4.00	3.68	92	3.57	89	78-120	3	20	mg/kg	10.11.19 23:40	
o-Xylene	<0.00682	2.00	1.86	93	1.81	91	78-120	3	20	mg/kg	10.11.19 23:40	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	83		78		79		68-120	%	10.11.19 23:40
a,a,a-Trifluorotoluene	91		84		84		71-121	%	10.11.19 23:40

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3104132 — Matrix: Soil — Date Prep: 10.11.19
Parent Sample Id: 639685-001 — MS Sample Id: 639685-001 S — MSD Sample Id: 639685-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00904	2.00	1.79	90	1.76	88	54-120	2	25	mg/kg	10.12.19 02:04	
Toluene	0.00600	2.00	1.78	89	1.79	89	57-120	1	25	mg/kg	10.12.19 02:04	
Ethylbenzene	<0.00616	2.00	1.78	89	1.91	96	58-131	7	25	mg/kg	10.12.19 02:04	
m,p-Xylenes	<0.00682	4.00	3.49	87	3.72	93	62-124	6	25	mg/kg	10.12.19 02:04	
o-Xylene	<0.00682	2.00	1.70	85	1.80	90	62-124	6	25	mg/kg	10.12.19 02:04	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	79		95		68-120	%	10.12.19 02:04
a,a,a-Trifluorotoluene	92		103		71-121	%	10.12.19 02:04

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

639685

639685

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: Bryant McBrayer
Sampler's Signature:

Project Number: CS197046
Project Name: Spur-Lakewood Federal #1

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE: 14
TEMP OF COOLER WHEN RECEIVED (°C): 3.1

Page ____ of ___

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	10/10/2019	11:40	X		CS-2.1	0'	0.5'		X			X	X	X					1
S	10/10/2019	11:45	X		SP-1.1	1.5'	2'		X			X	X	X					2
S	10/10/2019	11:50	X		CS-1.1	2.5'	3'		X			X	X	X					3

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

TRRP Laboratory Review Checklist ☐ Yes ☐ No

	Date	Time		Date	Time
Relinquished by (Signature)	10/10/19	16:30	Received by (Signature)	10/10/19	16:30
Relinquished by (Signature)			Received by (Signature)		
Relinquished by (Signature)			Received by (Signature)		
Relinquished by (Signature)			Received by (Signature)		

NOTES: Client: Spur

e-mail results to: end of day Monday 14th

bryant.mcbrayer@terracon.com
erin.loyd@terracon.com
jrguesnier@terracon.com

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

Inter-Office Shipment

IOS Number : 49901

Date/Time:	10.10.2019	Created by:	Brenda Ward	Please send report to:	Jessica Kramer
Lab# From:	**Lubbock**	Delivery Priority:		Address:	6701 Aberdeen, Suite 9 Lubbock, TX 79424
Lab# To:	**Houston**	Air Bill No.:	776689076547	E-Mail:	jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
639685-001	S	CS-2.1	10.10.2019 11:40	SW8015MOD_NM	TPH By SW8015 Mod	10.14.2019	10.24.2019	JKR	PHCC10C28 PHCC28C3	
639685-002	S	SP-1.1	10.10.2019 11:45	SW8015MOD_NM	TPH By SW8015 Mod	10.14.2019	10.24.2019	JKR	PHCC10C28 PHCC28C3	
639685-003	S	CS-1.1	10.10.2019 11:50	SW8015MOD_NM	TPH By SW8015 Mod	10.14.2019	10.24.2019	JKR	PHCC10C28 PHCC28C3	

Inter Office Shipment or Sample Comments:

Relinquished By: Brenda Ward

Brenda Ward

Date Relinquished: 10.10.2019

Received By: Travis Simmons

Travis Simmons

Date Received: 10.11.2019

Cooler Temperature: 2.0

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 49901

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

Sent By: Brenda Ward **Date Sent:** 10.10.2019 05.22 PM

Received By: Travis Simmons **Date Received:** 10.11.2019 09.45 AM

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

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ **Contacted by :** _____ **Date:** _____

Checklist reviewed by: Travis Simmons Date: 10.11.2019

Travis Simmons

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Terracon-Lubbock

Date/ Time Received: 10/10/2019 04:30:00 PM

Work Order #: 639685

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)?	13.1	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**	
#5 Custody Seals intact on sample bottles?	**N/A**	
#6*Custody Seals Signed and dated?	**N/A**	
#7 *Chain of Custody present?	**Yes**	
#8 Any missing/extra samples?	**No**	
#9 Chain of Custody signed when relinquished/ received?	**Yes**	
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**	
#11 Container label(s) legible and intact?	**Yes**	
#12 Samples in proper container/ bottle?	**Yes**	
#13 Samples properly preserved?	**Yes**	
#14 Sample container(s) intact?	**Yes**	
#15 Sufficient sample amount for indicated test(s)?	**Yes**	
#16 All samples received within hold time?	**Yes**	
#17 Subcontract of sample(s)?	**Yes**	TPH sent to Stafford
#18 Water VOC samples have zero headspace?	**N/A**	

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

Analyst: PH Device/Lot#:

Checklist completed by: Brenda Ward Date: 10/10/2019
Brenda Ward

Checklist reviewed by: Jessica Kramer Date: 10/13/2019
Jessica Kramer

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, Solaris Water Midstream, as reflected in our proposal (PA4197040).

Additional Scope Limitations

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

Reliance

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