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

)

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
0	34	19S	25E	Eddy

Surface Owner: State X Federal Tribal Private (Name: _____

Nature and Volume of Release

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

Volume Released (bbls)	Volume Recovered (bbls)
Volume Released (bbls) 10	Volume Recovered (bbls) 5
Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	Yes No
Volume Released (bbls)	Volume Recovered (bbls)
Volume Released (Mcf)	Volume Recovered (Mcf)
Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)
	Volume Released (bbls) 10 Is the concentration of dissolved chloride in the produced water >10,000 mg/l? Volume Released (bbls) Volume Released (Mcf)

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.

Form	n C-	14
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Pa		

Incident ID	NRM2003858408
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Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC?	If YES, for what reason(s) does the responsible party consider this a major release?
🗌 Yes 🔀 No	
If YES, was immediate no	otice 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

 \mathbf{X} The source of the release has been stopped.

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

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

X 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: <u>EHS Manager</u>
Signature: Braidy Moulder	Date: <u>1-3D-2020</u>
email: <u>bmoulder@spurepllc.com</u>	Telephone: <u>713-264-2517</u>
OCD Only Received by: Ramona Marcus	Date: 2/7/2020

Form C-141

State of New Mexico Oil Conservation Division

Incident ID	NRM2003858408
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>121</u> (ft bgs)
Did this release impact groundwater or surface water?	🗌 Yes 🛛 No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	🗋 Yes 🛛 No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	🗌 Yes 🛛 No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	🗌 Yes 🛛 No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	🗌 Yes 🛛 No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	🗌 Yes 🛛 No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	🗌 Yes 🛛 No
Are the lateral extents of the release within 300 feet of a wetland?	🗌 Yes 🛛 No
Are the lateral extents of the release overlying a subsurface mine?	🗌 Yes 🛛 No
Are the lateral extents of the release overlying an unstable area such as karst geology?	🗌 Yes 🛛 No
Are the lateral extents of the release within a 100-year floodplain?	🗌 Yes 🛛 No
Did the release impact areas not on an exploration, development, production, or storage site?	🗌 Yes 🛛 No

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

Characterization Report Checklist: 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 ¹/₂-mile of the lateral extents of the release
- Boring or excavation logs

2020 1-22-35 PM

Received

- Photographs including date and GIS information
- Topographic/Aerial maps
- Laboratory data including chain of custody

f the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation iplan. 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.

Form C-141	State of New Mexico Oil Conservation Divis		Incident ID District RP Facility ID Application ID	NRM2003858408
regulations all operators and public health or the enviro failed to adequately invest addition, OCD acceptance and/or regulations.	formation given above is true and complete to re required to report and/or file certain releas nment. The acceptance of a C-141 report by igate and remediate contamination that pose of a C-141 report does not relieve the opera	e notifications and perform the OCD does not relieve the a threat to groundwater, sur tor of responsibility for com	corrective actions for rele ne operator of liability sh face water, human health pliance with any other fe	eases which may endanger ould their operations have or the environment. In
Printed Name: Brai	dy Moulder	Title: EHS M	anager	
Signature: Braid	y Moulder	Date: 1-30-20	020	
email: bmoulde	dy Moulder y Moulder er Esporepile.com	Telephone: <u>113</u>	-264-2517	
OCD Only Received by: Ran	10na Marcus	Date: 2/7	/2020	

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State of New Mexico **Oil Conservation Division**

Incident ID	NRM2003858408
District RP	
Facility ID	
Application ID	

Remediation Plan

<u>Remediation Plan Checklist</u> : Each of the following items must be	e included in the plan.	
 Detailed description of proposed remediation technique Scaled sitemap with GPS coordinates showing delineation point Estimated volume of material to be remediated Closure criteria is to Table 1 specifications subject to 19.15.29.1 Proposed schedule for remediation (note if remediation plan times) 	2(C)(4) NMAC	
Deferral Requests Only: Each of the following items must be con	formed as part of any request for deferred of comediation	
Deterrar Requests Only: Each of the johowing tiens must be con	firmea as part of any request for deferrat of remeatation.	
Contamination must be in areas immediately under or around predeconstruction.	oduction equipment where remediation could cause a major facility	
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	
Printed Name: Braidy Moulder Signature: Braidy Moulder email: bmoulder@spurepllc.com	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 A	Approval Denied Deferral Approved	
Signature:	Date:	

Form C-141

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.

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
	Telephone: 713-264-2517

OCD Only

22:

Received by OCD:

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 emediate 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

Offices Nationwide Employee-Owned

Established in 1965 terracon.com



Geotechnical Environmental

Construction Materials

Facilities

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

Christian Erin Lovd. P

Principal Office Manager – Lubbock

Terracon Consultants, Inc. 5827 50th st. Suite 1 Lubbock, Texas 79424 P (806) 300 0140 F (806) 797 0947 terracon.com



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APPENDIX A – FIGURES AND TABLES

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i igaio	-	0.00	Diagram	

- Figure 3 Contamination Concentration Map
- Figure 4 Remediation Concentration Map
- Figure 5 NMOSE POD Location Map
- Figure 6 Cave Karst Public UCP
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APPENDIX B – PHOTOGRAPHIC LOG

APPENDIX C – ANALYTICAL REPORT AND CHAIN OF CUSTODY

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

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	The facility is operated by Spur Energy Partners LLC	
Local contact	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 bblsProducedWater:9bblscontainingapproximately 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.



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Release Investigation and Remedial Action Plan Lakewood Federal #1 Release
Eddy County, New Mexico October 18, 2019
Terracon Project No. AR197257

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:

Release Investigation and Remedial Action Plan

Lakewood Federal #1 Release Eddy County, New Mexico October 18, 2019 Terracon Project No. AR197257



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Table 1				
Closure Cr	iteria for Soils Im	pacted by a Relea	ase	
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**	
	Chloride***	EPA 300.0 or SM4500 CI B	600 mg/kg	
	TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015 M	100 mg/kg	
<u><</u> 50 feet	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg	
	Benzene	EPA SW-846 Method 8021B or 8260B	10 mg/kg	
	Chloride***	EPA 300.0 or SM4500 Cl B	10,000 mg/kg	
51 feet-100 feet	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	
	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	
>100 feet	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

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Release Investigation and Remedial Action Plan Lakewood Federal #1 Release
Eddy County, New Mexico October 18, 2019
Terracon Project No. AR197257

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
ТРН	2,500 mg/kg
(GRO+DRO+MRO)	
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

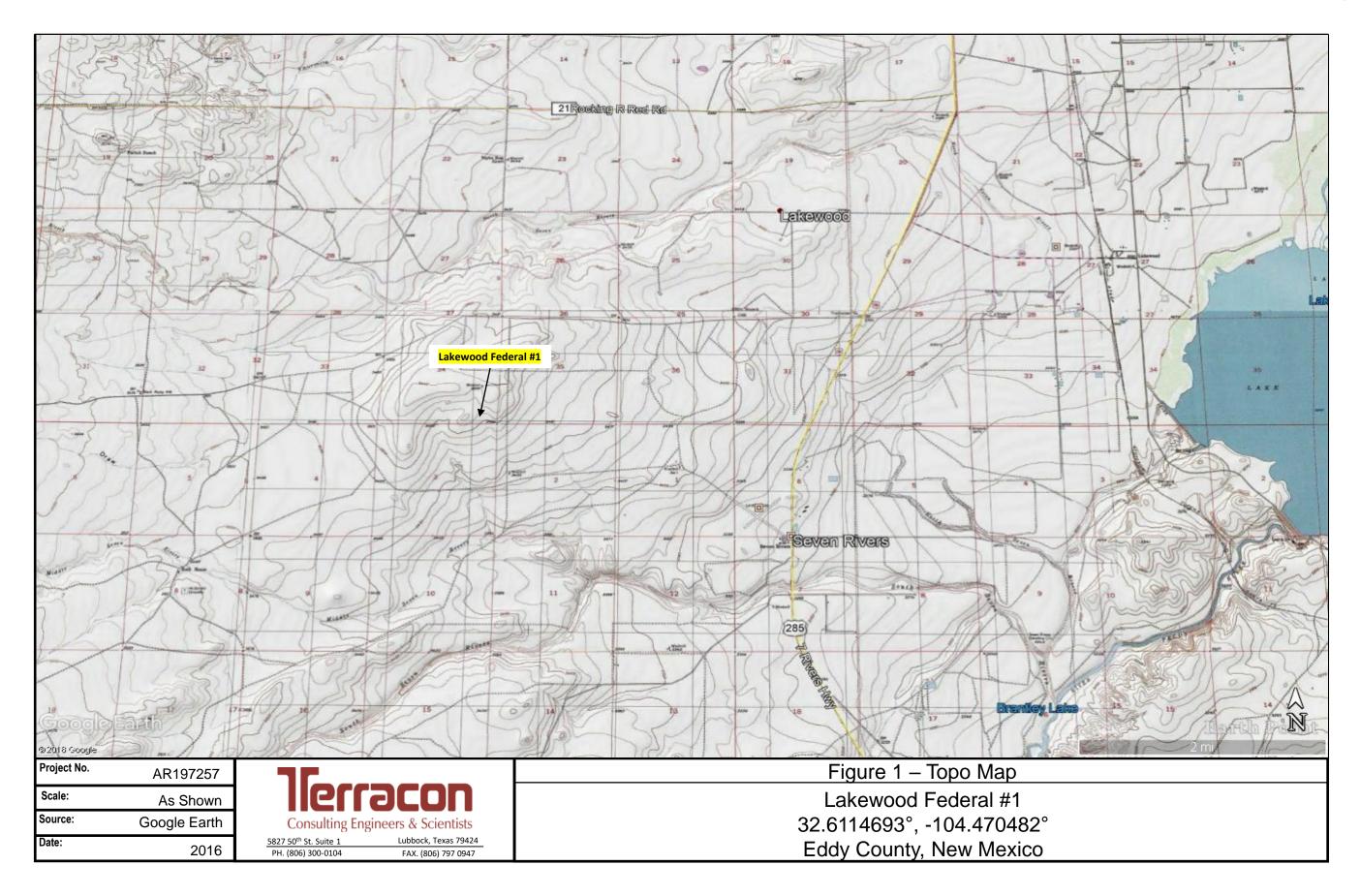
Upon termination of remedial actions (Sections 6 and 9), the area of the release will be closed by backfilling the excavated area, contouring to surrounding area topography and reseeding the area with approved-native vegetative seed.

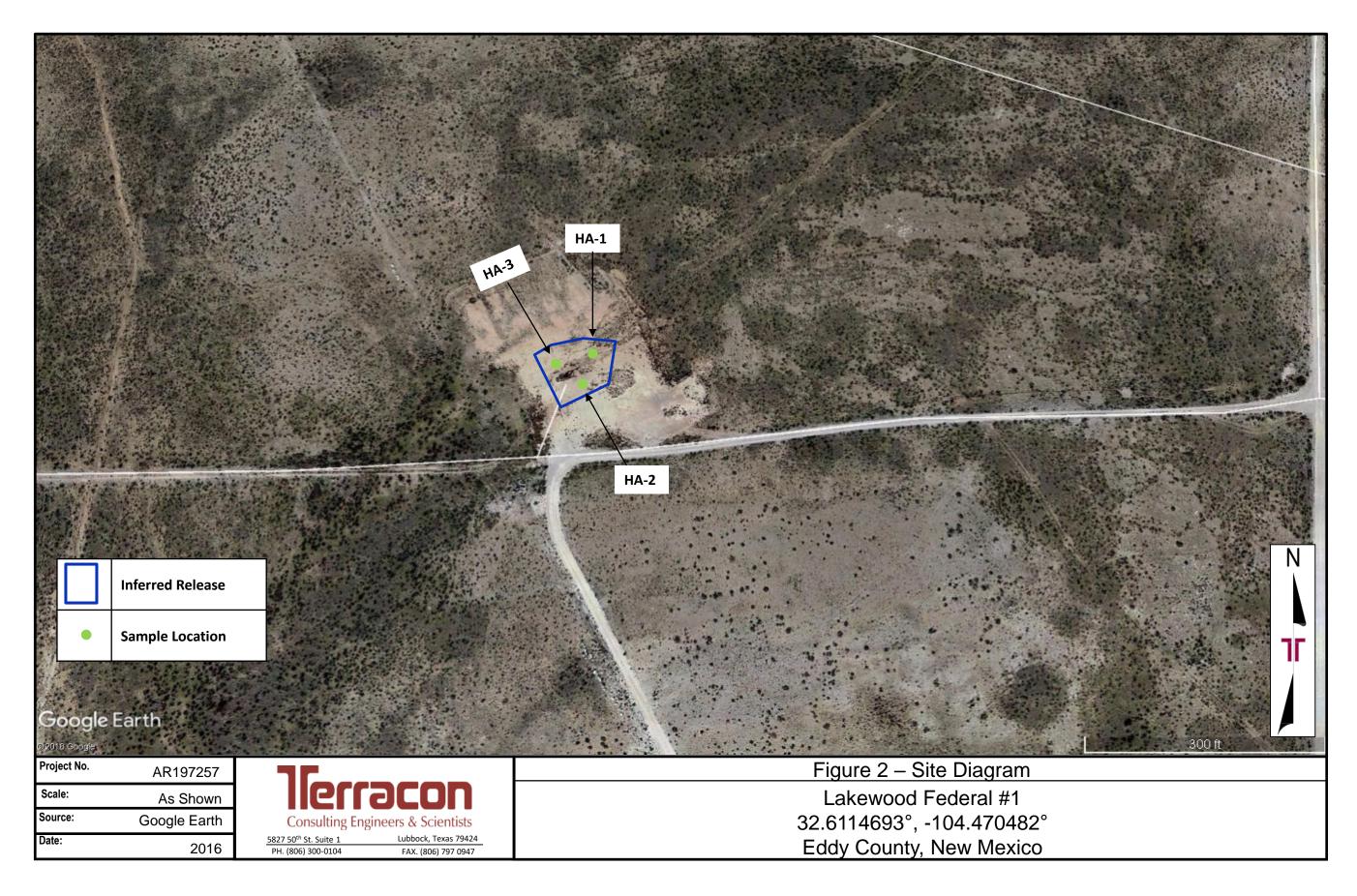
10.3 Final Report

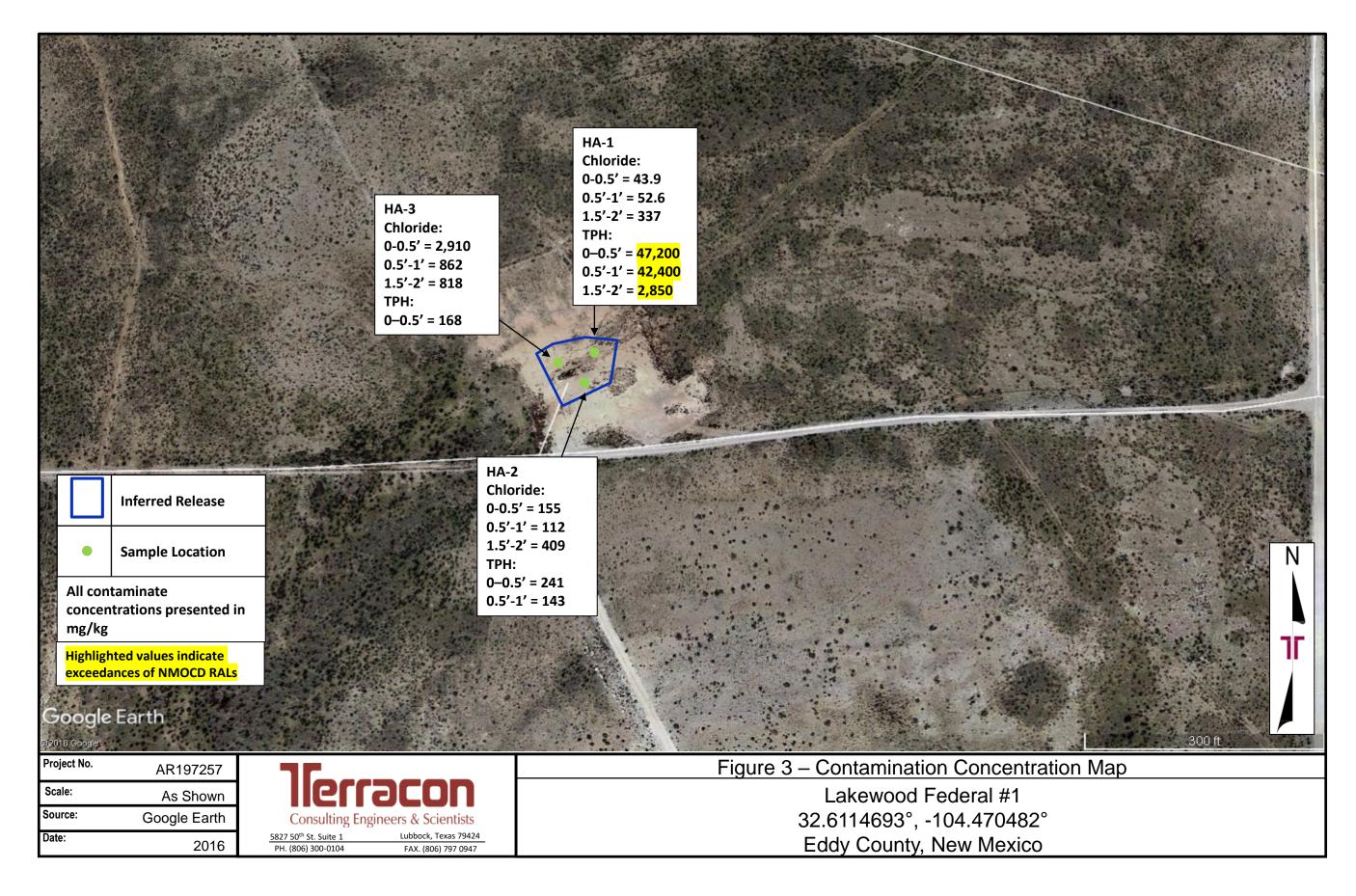
Upon completion of remedial activities, a final report summarizing actions taken to mitigate environmental damage related to the release will be provided to NMOCD for approval.

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







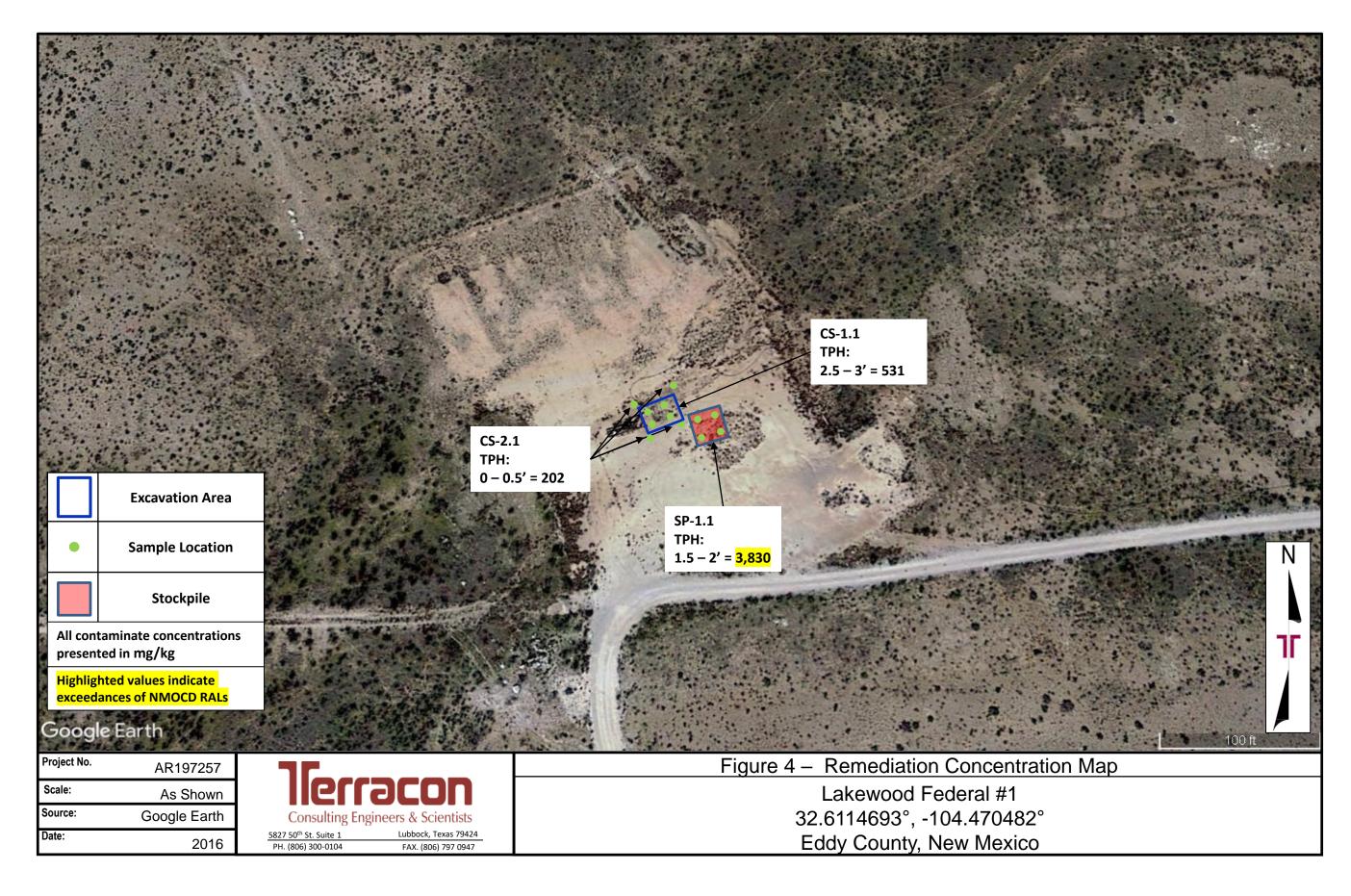
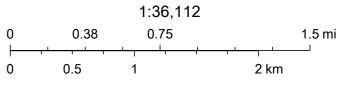


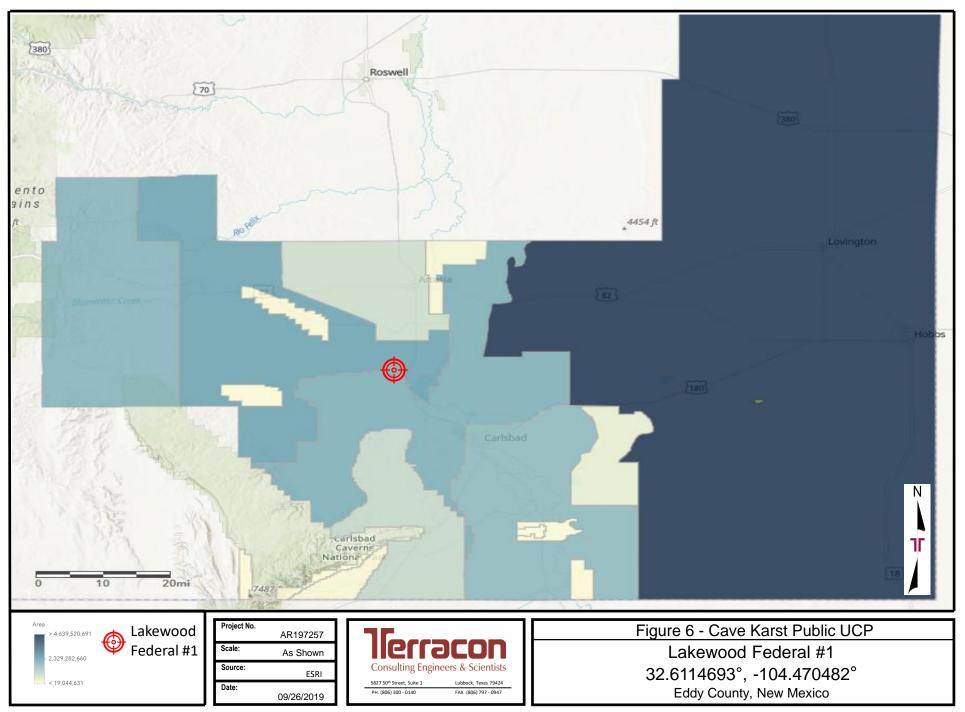
Figure 5 - NMOSE POD Location Map



10/17/2019 11:27:55 AM
OSE District Boundary



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



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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	TOTA	
	T	[[[Release Margin Samples Benzene - 0.150	T			[
HA-1 (05)	0 - 0.5'	Grab	07/22/19	Toluene - 1.64 Ethylbenzene - 1.13 Total Xylenes - 2.3 Total BTEX - 5.22	43.9	10,000	35,000	2,190	47,20	
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	42,40	
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 (05)	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 (05)	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		

I. 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.

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		s	OIL SAMPLE A	TABLE 2 NALYTICAL RESULTS - BTEX ¹ , Chloride Lakewood Federal #1 NMOCD Incident No. Terracon Project No. AR197257	² , and TPH ³				
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	

 Image: Total BTEX

 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.

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APPENDIX B – PHOTOGRAPHIC LOG







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



Terracon

Lakewood Federal #1 Eddy County, New Mexico October 17, 2019 Terracon Project No. AR197257





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



Lakewood Federal #1 Eddy County, New Mexico October 17, 2019 Terracon Project No. AR197257



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

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APPENDIX C – ANALYTICAL REPORT AND CHAIN OF CUSTODY



Project Id: AR197XXX **Contact:** John Fergerson

Project Location:

Certificate of Analysis Summary 631985

Terracon-Lubbock, Lubbock, TX Project Name: Lakewood Federal #1



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

	Lab Id:	631985-0	001	631985-0	002	631985-(003	631985-0	004	631985-0	005	631985-0	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)	
Analysis Requested	Depth:	0-0.5 f	ft	0.5-1 ft 1.5-2 ft		0-0.5 f	ť	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	Jul-26-19 13:00 J		13:00	Jul-26-19	13:00	Jul-26-19 1	3:00	Jul-26-19 13:00		Jul-25-19 14:05	
	Analyzed:	Jul-26-19	Jul-26-19 20:47 J		21:14	Jul-26-19 2	21:41	Jul-26-19 2	22:08	Jul-26-19 2	2:35	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			0.0183	1.92	0.0181	1.20	0.0177	0.0291	0.0182	0.0215	0.0179	0.0629	0.0196
Ethylbenzene	benzene		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	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 1	12:04
SUB: T104704215-19-29	Analyzed:	Jul-25-192	21:15	Jul-25-192	21:27	Jul-25-19 2	21:39	Jul-25-19 2	21:51	Jul-25-19 2	2:03	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	Extracted:	Jul-31-19	15:45	Jul-31-19	15:48	Jul-31-19	15:51	Jul-31-19 1	5:54	Jul-31-19 1	5:57	Jul-31-19 1	16:00
SUB: T104704215-19-29	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

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

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Version: 1.%

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Jessica Kramer Project Assistant



Project Id: AR197XXX **Contact:**

Project Location:

John Fergerson

Certificate of Analysis Summary 631985

Terracon-Lubbock, Lubbock, TX Project Name: Lakewood Federal #1



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

	Lab Id:	631985-0	007	631985-0	008	631985-0	09	631985-0	010		
An aluais Do su astad	Field Id:	HA-3 (0-	0.5)	HA-3 (0.	5-1)	HA-3 (1.	5-2)	HA-3 (3.	5-4)		
Analysis Requested	Depth:	0-0.5 f	ft	0.5-1 f	t	1.5-2 ft	t	3.5-4 ft			
	Matrix:	SOIL		SOIL		SOIL		SOIL			
	Sampled:	Jul-22-19	Jul-22-19 13:30		3:35	Jul-22-19 1	3:40	Jul-22-19 1	3:45		
BTEX by EPA 8021B	Extracted:	Jul-26-19	Jul-26-19 13:00		4:05	Jul-25-19 1	4:05	Jul-25-19 1	4:05		
	Analyzed:	Jul-26-19	Jul-26-19 18:59		2:47	Jul-25-19 2	3:11	Jul-25-19 2	3:36		
	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	Extracted:	Jul-25-19	12:04	Jul-25-19 12:04		Jul-25-19 12:04 Jul-25-1		Jul-25-19 1	2:04		
SUB: T104704215-19-29	Analyzed:	Jul-25-19	22:27	Jul-25-19 2	2:39	Jul-25-19 2	2:51	Jul-25-19 2	3:27		
	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	Extracted:	Jul-31-19	16:03	Jul-31-19 1	6:06	Jul-31-19 1	6:09	Jul-31-19 1	6:12		
SUB: T104704215-19-29	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		

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

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Version: 1.%

fession kenner

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 Vramer

Jessica Kramer Project Assistant

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Sample Cross Reference 631985



Terracon-Lubbock, Lubbock, TX

Lakewood Federal #1

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

Sample 1	Id
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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)
HA-3	(0-0.5)
HA-3	(0.5-1)
HA-3	(1.5-2)
HA-3	(3.5-4)



CASE NARRATIVE

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

Project ID:AR197XXXWork Order Number(s):631985

Report Date:06-AUG-19Date 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) Lab Sample Id: 631985-001	Matrix: Date Colle	Soil cted: 07.2	2.19 13.00		Date Received:07.2 Sample Depth:0 - (34
Analytical Method: Chloride by EPA 300					Prep Method: E30	00P	
Tech: JYM					% Moisture:		
Analyst: JYM	Date Prep:	07.2	5.19 12.04		Basis: We	t Weight	
Seq Number: 3096506	-				SUB: T104704215	-19-29	
Parameter Cas Number	r 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 SW801.Tech:ISUAnalyst:ISUSeq Number:3097314	5 Mod	Date Prej	p: 07.31	.19 15.45	% E	Prep Method: TX 6 Moisture: Basis: Wet 10B: T104704215	Weight	
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		





Terracon-Lubbock, Lubbock, TX

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

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) Lab Sample Id: 631985-002	Matrix: Date Collec	Soil cted: 07.22	.19 13.05		Date Received:07.2 Sample Depth: 0.5		4
Analytical Method: Chloride by EPA 300					Prep Method: E30	0P	
Tech: JYM					% Moisture:		
Analyst: JYM	Date Prep:	07.25	.19 12.04		Basis: We	t Weight	
Seq Number: 3096506					SUB: T104704215	-19-29	
Parameter Cas Numb	er 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 SW801: Tech: ISU Analyst: ISU Seq Number: 3097314	5 Mod	Date Prep	o: 07.31	.19 15.48	9 E	rep Method: TX 6 Moisture: Basis: Wet 10B: T104704215	t Weight	
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		





Terracon-Lubbock, Lubbock, TX

Sample Id: HA-1 (0.5-1) Lab Sample Id: 631985-002			Matrix: Date Collect	Soil ed: 07.22.19 13.05	Date Received:07.24.19 12.34 Sample Depth: 0.5 - 1 ft				
Analytical M	ethod: BTEX by EPA 80	21B			Prep Meth	od: SW5030B			
Tech:	MIT				% Moistur	e:			
Analyst:	MIT		Date Prep:	07.26.19 13.00	Basis:	Wet Weight			
Seq Number:	3096717								
Parameter		Cas Number	Result	RI. MDI.	Units Analys	is Date Flag	Dil		

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		



Certificate of Analytical Results 631985



Terracon-Lubbock, Lubbock, TX

Lakewood Federal #1

Sample Id: HA-1 (1.5-2) Lab Sample Id: 631985-003	Matrix: Date Collec	Soil cted: 07.22.19 13	.10	Date Received:07 Sample Depth: 1.5		ŀ
Analytical Method: Chloride by EPA 300				Prep Method: E3	00P	
Tech: JYM				% Moisture:		
Analyst: JYM	Date Prep:	07.25.19 12	.04	Basis: We	et Weight	
Seq Number: 3096506	-			SUB: T10470421	5-19-29	
Parameter Cas Nu	ımber Result	RL MDL	L Units	Analysis Date	Flag	Dil
Chloride 16887-0	0-6 337	9.98 0.3	353 mg/kg	07.25.19 21.39		1

Analytical Method:TPH By SW801Tech:ISUAnalyst:ISUSeq Number:3097314	5 Mod	Date Prep	o: 07.31	.19 15.51	9 E	Prep Method: TX 6 Moisture: Basis: We 5UB: T104704215	t Weight	
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		





Terracon-Lubbock, Lubbock, TX

Sample Id: Lab Sample I	HA-1 (1.5-2) Id: 631985-003		Matrix: Date Collect	Soil ed: 07.22.19 13.10		ved:07.24.19 12.3 pth: 1.5 - 2 ft	4
Analytical M	ethod: BTEX by EPA 80	21B			Prep Metho	od: SW5030B	
Tech:	MIT				% Moistur	e:	
Analyst:	MIT		Date Prep:	07.26.19 13.00	Basis:	Wet Weight	
Seq Number:	3096717						
Parameter		Cas Number	Result	RI. MDI.	Units Analysi	s Date Flag	Dil

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		





Terracon-Lubbock, Lubbock, TX

Lakewood Federal #1

Sample Id: HA-2 (0-0.5) Lab Sample Id: 631985-004	Matrix: Date Collec	Soil ted: 07.22.19 1	3.15	Date Received:07. Sample Depth: 0 -		
Analytical Method: Chloride by EPA 300				Prep Method: E3	00P	
Tech: JYM				% Moisture:		
Analyst: JYM	Date Prep:	07.25.19 1	2.04	Basis: We	et Weight	
Seq Number: 3096506	-			SUB: T10470421	5-19-29	
Parameter Cas Num	ber Result	RL MI	DL Units	Analysis Date	Flag	Dil
Chloride 16887-00-0	5 155	9.88	0.350 mg/kg	07.25.19 21.51		1

Analytical Method:TPH By SW801.Tech:ISUAnalyst:ISUSeq Number:3097314	5 Mod	Date Prep	o: 07.31	.19 15.54	% E	rep Method: TX 6 Moisture: 8asis: We 10B: T104704215	t Weight	
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		





Terracon-Lubbock, Lubbock, TX

Sample Id: HA-2 (0-0.5) Lab Sample Id: 631985-004		Matrix: Date Collecte	Soil ed: 07.22.19 13.15		ived:07.24.19 12.34 epth: 0 - 0.5 ft	4
Analytical Method: BTEX by EPA	8021B			1	od: SW5030B	
Tech: MIT				% Moistur		
Analyst: MIT		Date Prep:	07.26.19 13.00	Basis:	Wet Weight	
Seq Number: 3096717						
Parameter	Cas Number	Result I	RL MDL	Units Analys	is Date Flag	Dil

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) Lab Sample Id: 631985-005	Matrix: Date Colle	Soil ected: 07.2	2.19 13.20		Date Received:07. Sample Depth:0.5		34
Analytical Method: Chloride by EPA 300					Prep Method: E30)0P	
Tech: JYM					% Moisture:		
Analyst: JYM	Date Prep:	07.2	5.19 12.04		Basis: We	t 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 SW801. Tech: ISU Analyst: ISU Seq Number: 3097314	5 Mod	Date Prep	p: 07.31	.19 15.57	9 E	Prep Method: TX 6 Moisture: 3asis: We 5UB: T104704215	t Weight	
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		





Terracon-Lubbock, Lubbock, TX

Sample Id: HA-2 (0.5-1) Lab Sample Id: 631985-005	Matrix: Soil Date Collected: 07.22.19 13.	Date Received:07.24.19 12.34 20 Sample Depth: 0.5 - 1 ft
Analytical Method: BTEX by EPA 8021B Tech: MIT		Prep Method: SW5030B % Moisture:
Analyst: MIT Seq Number: 3096717	Date Prep: 07.26.19 13.	00 Basis: Wet Weight

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		





Terracon-Lubbock, Lubbock, TX

Lakewood Federal #1

Sample Id: HA-2 (1.5-2) Lab Sample Id: 631985-006	Matrix: Date Colle	Soil cted: 07.22.19	13.25	Date Received: Sample Depth:		
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: T104704	215-19-29	
Parameter Cas	s Number Result	RL M	DL Units	Analysis Dat	te Flag	Dil
Chloride 1688	7-00-6 409	9.94	0.352 mg/kg	07.25.19 22.1	5	1

Analytical Method: TPH By SW80 Tech: ISU Analyst: ISU	15 Mod	Date Pre	p: 07.31	.19 16.00	9	Prep Method: TX 6 Moisture: Basis: We	1005P t Weight	
Seq Number: 3097314					S	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		





Terracon-Lubbock, Lubbock, TX

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 8021BTech:MITAnalyst:MITSeq Number:3096550	Date Prep: 07.25.19 14.05	Prep Method: SW5030B % Moisture: Basis: Wet Weight

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		





Terracon-Lubbock, Lubbock, TX

Lakewood Federal #1

Sample Id: HA-3 (0-0.5) Lab Sample Id: 631985-007	Matrix: Date Colle	Soil cted: 07.2	2.19 13.30		Date Received:07. Sample Depth:0 -		34
Analytical Method: Chloride by EPA 300					Prep Method: E30)0P	
Tech: JYM					% Moisture:		
Analyst: JYM	Date Prep:	07.2	5.19 12.04		Basis: We	t 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 SW801.Tech:ISUAnalyst:ISUSeq Number:3097314	5 Mod	Date Prep	o: 07.31	.19 16.03	% E	Prep Method: TX 6 Moisture: 8asis: We 6UB: T104704215	t Weight	
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		





Terracon-Lubbock, Lubbock, TX

Sample Id: Lab Sample I	HA-3 (0-0.5) d: 631985-007		Matrix: Date Collecte	Soil ed: 07.22.19 13.30		ved:07.24.19 12.34 pth:0 - 0.5 ft	1
Analytical M	ethod: BTEX by EPA 80	21B			Prep Metho	od: 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

rarameter	Cas Number	Result	KL	MDL	Units	Analysis Date	Flag	Dii
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		





Terracon-Lubbock, Lubbock, TX

Lakewood Federal #1

Sample Id: HA-3 (0.5-1) Lab Sample Id: 631985-008	Matrix: Date Colle	Soil ected: 07.2	2.19 13.35		Date Received:07. Sample Depth:0.5		34
Analytical Method: Chloride by EPA 300					Prep Method: E30)0P	
Tech: JYM					% Moisture:		
Analyst: JYM	Date Prep	: 07.2	5.19 12.04		Basis: We	t 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 SW80 Tech: ISU Analyst: ISU	15 Mod	Date Pre	p: 07.31	.19 16.06	9	Prep Method: TX 6 Moisture: Basis: We	1005P t Weight	
Seq Number: 3097314			-		S	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 8021BTech:MITAnalyst:MITSeq Number:3096550	Date Prep: 07.25.19 14.05	Prep Method: SW5030B % Moisture: Basis: Wet Weight

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) Lab Sample Id: 631985-009	Matrix: Date Collec	Soil eted: 07.22.19 13.40		Date Received:07.24.19 12.34 Sample Depth: 1.5 - 2 ft		
Analytical Method: Chloride by EPA 300			Prep Met	hod: E300P		
Tech: JYM			% Moist	ire:		
Analyst: JYM	Date Prep:	07.25.19 12.04	Basis:	Wet Weight		
Seq Number: 3096506			SUB: T1	04704215-19-29		
Parameter Cas N	Number Result	RL MDL	Units Analy	sis Date Flag	Dil	
Chloride 16887-	00-6 818	9.92 0.351	mg/kg 07.25.	19 22.51	1	

Analytical Method: TPH By SW80 Tech: ISU Analyst: ISU Seq Number: 3097314	Date Pre	p: 07.31	.19 16.09	Prep Method: TX1005P % Moisture: Basis: Wet Weight SUB: T104704215-19-29					
Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil	
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.91	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

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 8021BTech:MITAnalyst:MITSeq Number:3096550	Date Prep: 07.25.19 14.05	Prep Method: SW5030B % Moisture: Basis: Wet Weight

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00864	0.0191	0.00864	mg/kg	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		





Terracon-Lubbock, Lubbock, TX

Sample Id: HA-3 (3.5-4) Lab Sample Id: 631985-010	Matrix: Date Collec	Soil eted: 07.22.19 13.4	45	Date Received:07.24.19 12.34 Sample Depth: 3.5 - 4 ft		
Analytical Method: Chloride by EPA 300				Prep Method: E3	00P	
Tech: JYM				% Moisture:		
Analyst: JYM	Date Prep:	07.25.19 12.0)4	Basis: We	t Weight	
Seq Number: 3096506	-			SUB: T104704215	5-19-29	
Parameter Cas Nu	ımber Result	RL MDL	Units	Analysis Date	Flag	Dil
Chloride 16887-0	0-6 571	9.90 0.3	50 mg/kg	07.25.19 23.27		1

Analytical Method: TPH By SW801 Tech: ISU Analyst: ISU Seq Number: 3097314	Date Prep	p: 07.31	.19 16.12	Prep Method: TX1005P % Moisture: Basis: Wet Weight SUB: T104704215-19-29				
1	Cas Number	Result	DI	MDI	_			D "
Parameter	Cas Number	Kesun	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

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

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



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- 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 LimitSDLSample Detection LimitLOD Limit of Detection
- PQL Practical Quantitation Limit MQL Method Quantitation Limit LOQ Limit of Quantitation
- DL Method Detection Limit
- NC Non-Calculable

SMP Clie	ent Sample	BLK	Method Blank	
BKS/LCS	Blank Spike/Laboratory Control Sample	BKSD/LCSD	Blank Spike Duplicate/Labo	ratory 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 3	00						Pr	ep Metho	d: E30	0P	
Seq Number:	3096506 Matrix:				Solid Date Prep: 07.25.19					25.19		
MB Sample Id:	7682764-1-BLK	LCS Sample Id: 7682764-1-BKS LCSD Sample Id: 7				e Id: 7682764-1-BSD						
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD]	RPD Limi	t 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							Pr	ep Metho	od: E30	0P		
Seq Number:	3096506			Matrix:	Soil				Date Pre	ep: 07.2	25.19		
Parent Sample Id:	631980-001	30-001 MS Sample Id:				631980-001 S MSD Sample Id:				Id: 631	631980-001 SD		
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limi	it 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 30	00						Pı	ep Meth	od: E30	0P	
Seq Number:	3096506			Matrix:	Soil				Date Pr	ep: 07.2	5.19	
Parent Sample Id:	631980-002		MS Sar	nple Id:	631980-00	02 S		MS	D Sample	e Id: 631	980-002 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Lim	it Units	Analysis Date	Flag
Chloride	2220	99.8	2310	90	2300	80	80-120	0	20	mg/kg	07.25.19 20:03	

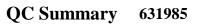
Analytical Method:	TPH By S	W8015 M	od]	Prep Metho	d: TX1	005P	
Seq Number:	3097314				Matrix:	Solid				Date Pre	p: 07.3	1.19	
MB Sample Id:	7683241-1	-BLK		LCS Sar	nple Id:	7683241-	1-BKS		LC	SD Sample	Id: 7683	3241-1-BSD	
Parameter		MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPE	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarb	ons (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		CS Rec	LCS Flag	LCSI %Re			Limits	Units	Analysis Date	
1-Chlorooctane		102		1	11		112		7	70-135	%	07.31.19 23:11	
o-Terphenyl		122		1	15		116		2	70-135	%	07.31.19 23:11	

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

LCS = Laboratory Control Sample A = Parent Result C = MS/LCS Result E = MSD/LCSD Result MS = Matrix Spike B = Spike Added D = MSD/LCSD % Rec



BORATORIES



Terracon-Lubbock

Lakewood Federal #1

Analytical Method: Seq Number:	TPH By S 3097314	W8015 M	lod		Matrix:	Soil				Prep Method Date Prep		005P 1.19	
Parent Sample Id:	631951-04	0		MS San	nple Id:	631951-04	40 S		Μ	SD Sample l	ld: 6319	951-040 SD	
Parameter		Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPI	O RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarb	ons (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					IS Rec	MS Flag	MSD %Re			Limits	Units	Analysis Date	
1-Chlorooctane				1	06		104			70-135	%	08.01.19 00:25	
o-Terphenyl				1	05		104			70-135	%	08.01.19 00:25	

Analytical Method: Seq Number: MB Sample Id:	BTEX by EPA 802 3096550 7682863-1-BLK	1B	LCS San	Matrix: nple Id:		1-BKS			Prep Metho Date Pre CSD Sample	p: 07.2	5030B 5.19 2863-1-BSD	
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RP	D RPD Limit	t 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		CS Rec	LCS Flag	LCSE %Rec	·		Limits	Units	Analysis Date	
4-Bromofluorobenzene	92		ç	98		95			68-120	%	07.25.19 17:33	
a,a,a-Trifluorotoluene	99		1	05		102			71-121	%	07.25.19 17:33	

Analytical Method: Seq Number: MB Sample Id:	BTEX by EPA 802 3096717 7682998-1-BLK	1B] LCS San	Matrix: nple Id:	Solid 7682998-	1-BKS			Prep Metho Date Pre SD Sample	p: 07.2	5030B 6.19 2998-1-BSD	
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPI	D RPD Limit	t 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		CS Rec	LCS Flag	LCSD %Rec			Limits	Units	Analysis Date	
4-Bromofluorobenzene	93		8	37		87			68-120	%	07.26.19 16:44	
a,a,a-Trifluorotoluene	88		7	8		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



BORATORIES

QC Summary 631985

Terracon-Lubbock

Lakewood Federal #1

Analytical Method: Seq Number: Parent Sample Id:	BTEX by EPA 802 3096550 631980-001	1B	MS San	Matrix: nple Id:		01 S			Prep Metho Date Pro SD Sample	ep: 07.2	5030B 5.19 980-001 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPI	ORPD Lim	it 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				1S Rec	MS Flag	MSD %Re		-	Limits	Units	Analysis Date	
4-Bromofluorobenzene			8	36		90		(58-120	%	07.25.19 19:58	
a,a,a-Trifluorotoluene			1	03		108			71-121	%	07.25.19 19:58	

Analytical Method:	BTEX by EPA 802	1B						F	Prep Metho	d: SW3	5030B	
Seq Number:	3096717		-	Matrix:	Soil				Date Pre	p: 07.2	6.19	
Parent Sample Id:	631985-007		MS San	nple Id:	631985-00	07 S		MS	SD Sample	Id: 6319	985-007 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limi	t 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				1S Rec	MS Flag	MSD %Rec		_	Limits	Units	Analysis Date	
4-Bromofluorobenzene			ç	95		92		6	8-120	%	07.26.19 19:26	
a,a,a-Trifluorotoluene			8	32		81		7	1-121	%	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

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WW-Wastewater W-Water 5-Soll L-Liquid A-Art Bag C-Charcoal tube SL-Sludge VOA-40 M Val VA	www.watewater www.watewater www.watewater s Suid 1- Liquid A - Air Bag C. Charcoil tube Si - Sludge vola40 m1 val vola40 m1 val yor-Facility on the si - Sludge Si - Sludge Vola40 m1 val vola40 m1 val yor-Facility on the si - Sludge Lubbock Office \$527 50th Street, Suite 1 Lubbock, Texas 79424 \$806-300-0140	www.wreeverer www.wreeverer s.sell tUquid A. Are bag cCoarceal tube StSluge voa40 mi val AG. Amber dists. 3-sell tUquid A-Are bag C-Coarceal tube StSluge voa40 mi val AG. Amber dists. 3-sell tUquid A-Are bag StSluge Voa40 mi val AG. Amber dists. 3-sell tUquid A-Are bag StSluge Voa40 mi val AG. Amber dists. 3-sell relation orbit. Pro-Position orbit. StSluge Lubbock Office 5827 50th Street, Suite 1 = Lubbock, Texas 79424 = 806-300-0140 Responsive = Resourceful = Relisible	hed by (Signature)			Time:	eceived by (Signature)			Date;	Ē	Tie:	-	iranoco	or @toren		
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Page 31 of 35

Final 1.000

Inter-Office Shipment

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IOS Number : **44917**

Date/Time	: 07.24.2019 16:26	Created by:	Brenda Ward		Please send report to	o: Jessica Kran	ner		
Lab# From	i: Lubbock	Delivery Priorit	ty:		Address:	6701 Aberde	een, Sui	te 9 Lubbock, TX 7942	.4
Lab# To:	Houston	Air Bill No.:	775827605482	2	E-Mail:	jessica.kram	er@xen	ico.com	
Sample Id	Matrix Client Sample Id	Sample Collection	Method	Method Name	Lab Due		DM		G.
Sample Iu	Matrix Chent Sample Iu	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 E3	300_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 SW	W8015MOD_NM	TPH By SW8015 Mod	07.30.2019	08.05.2019	JKR	PHCC10C28 PHCC28C35	
631985-002	S HA-1 (0.5-1)	07.22.2019 13:05 E3	300_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 SW	W8015MOD_NM	TPH By SW8015 Mod	07.30.2019	08.05.2019	JKR	PHCC10C28 PHCC28C35	
631985-003	S HA-1 (1.5-2)	07.22.2019 13:10 E3	300_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 SW	W8015MOD_NM	TPH By SW8015 Mod	07.30.2019	08.05.2019	JKR	PHCC10C28 PHCC28C35	
631985-004	S HA-2 (0-0.5)	07.22.2019 13:15 E3	300_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 SW	W8015MOD_NM	TPH By SW8015 Mod	07.30.2019	08.05.2019	JKR	PHCC10C28 PHCC28C35	
631985-005	S HA-2 (0.5-1)	07.22.2019 13:20 E3	300_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 SW	W8015MOD_NM	TPH By SW8015 Mod	07.30.2019	08.05.2019	JKR	PHCC10C28 PHCC28C35	
631985-006	S HA-2 (1.5-2)	07.22.2019 13:25 E3	300_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 SW	W8015MOD_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 E3	300_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 SW	W8015MOD_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 E3	300_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 SW	W8015MOD_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 E3	300_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 SW	W8015MOD_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 SW	W8015MOD_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 E3	300_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

Lab# From: Lubbock

Lab# To: Houston

Created by: Brenda Ward Delivery Priority: Air Bill No.: 775827605482

Inter Office Shipment or Sample Comments:

Relinquished By:

renda Ward Brenda Ward

Date Relinquished: 07.24.2019

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

Received By:

uaux Jinmay

Travis Simmons

07.25.2019 09:20

Date Received:

Cooler Temperature: 1.3



TORIES

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:

Contact:

Nonconformance Documentation

Contacted by :

Date:

Checklist reviewed by:

uaux

Travis Simmons

Date: 07.25.2019

Received by OCD: 2/5/2020 1:22:35 PM



XENCO Laboratories



Prelogin/Nonconformance Report- Sample Log-In

Client: Terracon-Lubbock	Acceptable Temperature Range: 0 - 6 degC					
Date/ Time Received: 07/24/2019 12:34:00 PM	Air and Metal samples Acce	ptable Range: Ambient				
Work Order #: 631985	Temperature Measuring dev	g device used: IR-3				
Sample Recei	pt 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

Checklist reviewed by: Jessica Veamer

Jessica Kramer

Date: 07/25/2019



Project Id: CS197046 **Contact:** Joseph Guesnier

Project Location:

Certificate of Analysis Summary 639685

Terracon-Lubbock, Lubbock, TX Project Name: Spur-Lakewood Federal



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

	Lab Id:	639685-0	001	639685-0	002	639685-0	02		
Analysis Requested	Field Id:	CS-2.1		SP-1.1		CS-1.1			
	Depth:	0-0.5 f	ť	1.5-2 ft		2.5-3 ft	:		
	Matrix:	SOIL		SOIL		SOIL			
	Sampled:	Oct-10-19	Oct-10-19 11:40		11:45	Oct-10-19 1	1:50		
BTEX by EPA 8021B	Extracted:	Oct-11-19	Oct-11-19 10:40		10:40	Oct-11-19 1	0:40		1
	Analyzed:	Oct-12-19	01:40	Oct-12-19 (04:05	Oct-12-19 0	3:41		
	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 1	0:15		
	Analyzed:	Oct-14-19	11:28	Oct-14-19	1:40	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	Extracted:	Oct-11-19	17:39	Oct-11-19	17:48	Oct-11-19 1	7:51		
SUB: T104704215-19-30	Analyzed:	Oct-12-19	18:59	Oct-12-19	19:55	Oct-12-19 2	0:14		
	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		

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

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

Version: 1.%

fession kenner

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 Vramer

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 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



CASE NARRATIVE

Client Name: Terracon-Lubbock Project Name: Spur-Lakewood Federal

Project ID:CS197046Work 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.





1

Terracon-Lubbock, Lubbock, TX

Spur-Lakewood Federal

Sample Id: CS-2.1 Lab Sample Id: 639685-001		Matrix: Date Collecte	Soil d: 10.10.19 11.40		Date Received: Sample Depth:		
Analytical Method: Chloride by EPA Tech: RNL	300		10.11.10.10.15		Prep Method: % Moisture:		
Analyst: RNL Seq Number: 3104159		Date Prep:	10.11.19 10.15		Basis:	Wet Weight	
Parameter	Cas Number	Result R	L MDL	Units	Analysis Dat	te Flag	Dil

	ous i tumoti	100000	RL	MDL	Onto	marysis Date	The
Chloride	16887-00-6	162	25.0	0.572	mg/kg	10.14.19 11.28	

Analytical Method: TPH By SW801: Tech: DRU Analyst: ISU	5 Mod	Date Prep	o: 10.11	.19 17.39	% E		t Weight	
Seq Number: 3104135					S	UB: 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		





Terracon-Lubbock, Lubbock, TX

Spur-Lakewood Federal

Sample Id: CS-2.1 Lab Sample Id: 639685-001	Matrix: Soil Date Collected: 10.10.	19 11.40	Date Received:10.10.19 16.30 Sample Depth: 0 - 0.5 ft		
Analytical Method:BTEX by EPA 8021BTech:MITAnalyst:MITSeq Number:3104132	Date Prep: 10.11.	.19 10.40	Prep Method: % Moisture: Basis:	SW5030B Wet Weight	

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		





Terracon-Lubbock, Lubbock, TX

Spur-Lakewood Federal

Sample Id: Lab Sample Id	SP-1.1 d: 639685-002		Matrix: Date Collecte	Soil d: 10.10.19 11.45		Date Received Sample Depth	l:10.10.19 16.30 : 1.5 - 2 ft)
2	ethod: Chloride by EPA 3 RNL	800				Prep Method: % Moisture:	E300P	
Tech: Analyst:	RNL		Date Prep:	10.11.19 10.15		Basis:	Wet Weight	
Seq Number:	3104159						C	
Parameter		Cas Number	Result R	L MDL	Units	Analysis Da	ate Flag	Dil

Tarancter	Cas Mulliber	Kesun	KL	MDL	Units	Analysis Date	Flag	DII
Chloride	16887-00-6	450	125	2.86	mg/kg	10.14.19 11.40		5

Analytical Method: TPH By SW801: Tech: DRU Analyst: ISU	5 Mod	Date Prep	: 10.11	.19 17.48	9/	Prep Method: SW 6 Moisture: Basis: We	8015P t Weight	
Seq Number: 3104135			S	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		





Terracon-Lubbock, Lubbock, TX

Spur-Lakewood Federal

Sample Id: SP-1.1 Lab Sample Id: 639685-002	Matrix:	Soil	Date Receive	ed:10.10.19 16.30
	Date Collecte	cd: 10.10.19 11.45	Sample Dep	th: 1.5 - 2 ft
Analytical Method:BTEX by EPA 8021BTech:MITAnalyst:MITSeq Number:3104132	Date Prep:	10.11.19 10.40	Prep Methoc % Moisture: Basis:	l: SW5030B Wet Weight

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		





Terracon-Lubbock, Lubbock, TX

Spur-Lakewood Federal

Sample Id: CS-1.1 Lab Sample Id: 639685-003		Matrix: Date Collecte	Soil d: 10.10.19 11.50		red:10.10.19 16.30 oth: 2.5 - 3 ft	
Analytical Method: Chloride by EPA Tech: RNL Analyst: RNL	300	Date Prep:	10.11.19 10.15	Prep Metho % Moisture Basis:		
Seq Number: 3104159 Parameter	Cas Number	Result R	L MDL	Units Analysis	Date Flag Dil	

	Cas Number	Ktsuit	KL	MDL	Units	Analysis Date	riag	Dii
Chloride	16887-00-6	2.88	25.0	0.572	mg/kg	10.14.19 11.53	J	1

Analytical Method: TPH By SW801: Tech: DRU Analyst: ISU	5 Mod	Date Prep	p: 10.11	.19 17.51	Prep Method: SW8015P % Moisture: 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				





Terracon-Lubbock, Lubbock, TX

Spur-Lakewood Federal

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

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



Page 85 of 92

- 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 LimitSDLSample Detection LimitLOD Limit of Detection
- PQL Practical Quantitation Limit MQL Method Quantitation Limit LOQ Limit of Quantitation
- DL Method Detection Limit
- NC Non-Calculable

SMP Clie	ent Sample	BLK	Method Blank	
BKS/LCS	Blank Spike/Laboratory Control Sample	BKSD/LCSD	Blank Spike Duplicate/Labor	ratory 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)						Pr	ep Metho	d: E30	0P	
Seq Number:	3104159			Matrix:	Solid				Date Pre	p: 10.1	1.19	
MB Sample Id:	7688023-1-BLK		LCS San	nple Id:	7688023-	I-BKS		LCSI	O Sample	Id: 768	8023-1-BSD	
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag

Analytical Method:	Chloride by EPA 30	00						P	rep Metho	od: E30	0P	
Seq Number:	3104159	Matrix:	Soil				Date Pr	ep: 10.1	1.19			
Parent Sample Id:	639679-001		MS San	nple Id:	639679-00	01 S		MS	D Sample	e Id: 6396	679-001 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Lim	it 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 S	W8015 M	lod						I	Prep Metho	d: SW	8015P	
Seq Number:	3104135			Matrix: Solid				Date Prep: 10.11.19					
MB Sample Id:	7687977-1	-BLK		LCS Sar	nple Id:	7687977-	1-BKS		LCS	SD Sample	Id: 768	7977-1-BSD	
Parameter		MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarb	ons (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 Flag	LCSI %Re		-	Limits	Units	Analysis Date	
1-Chlorooctane		106		1	15		111		7	0-135	%	10.12.19 18:03	
o-Terphenyl		121		1	13		107		7	0-135	%	10.12.19 18:03	

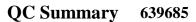
Analytical Method:	TPH By SW8015 Mod			Prep Method:	SW80	015P	
Seq Number:	3104135	Matrix:	Solid	Date Prep:	10.11	.19	
		MB Sample Id:	7687977-1-BLK				
Parameter		MB Result		U	J nits	Analysis Date	Flag

[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



BORATORIES



Terracon-Lubbock

Spur-Lakewood Federal

Analytical Method:	TPH By S	SW8015 M	lod						F	Prep Method	l: SW8	3015P	
Seq Number:	3104135				Matrix:	Soil				Date Prep	p: 10.1	1.19	
Parent Sample Id:	639685-00	01		MS Sample Id: 639685-001 S		01 S	S MSD Sample Id: 639				585-001 SD		
Parameter		Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarb	oons (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					/IS Rec	MS Flag	MSE %Re			limits	Units	Analysis Date	
1-Chlorooctane				1	07		110)	7	0-135	%	10.12.19 19:18	
o-Terphenyl				Ģ	95		90		7	0-135	%	10.12.19 19:18	

Analytical Method: Seq Number: MB Sample Id:	BTEX by EPA 802 3104132 7687946-1-BLK	1B		Matrix: nple Id:	Solid 7687946-	1-BKS			Prep Methoo Date Prej SD Sample	p: 10.1	5030B 1.19 7946-1-BSD	
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RP	D 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 Flag	LCSE %Rec			Limits	Units	Analysis Date	
4-Bromofluorobenzene	83		7	78		79			68-120	%	10.11.19 23:40	
a,a,a-Trifluorotoluene	91		8	34		84			71-121	%	10.11.19 23:40	

Analytical Method: Seq Number: Parent Sample Id:	BTEX by EPA 802 3104132 639685-001	1B	MS San	Matrix: nple Id:		01 S			Prep Methoo Date Prej SD Sample	p: 10.1	5030B 1.19 585-001 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPI) 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				1S Rec	MS Flag	MSD %Ree			Limits	Units	Analysis Date	
4-Bromofluorobenzene			7	79		95		(58-120	%	10.12.19 02:04	
a,a,a-Trifluorotoluene			ç	92		103		,	71-121	%	10.12.19 02:04	

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

639685

CHAIN OF CUSTODY RECORD	Page of		Image: Second		Tekas 79424 Tekas 79424 10, Type of Class 10, Type of Class 10, Type of Class					C Crab Crab Crab	Planet Pl	C3197046	Office Location Project Manager Sampler's Name Project Number S 10/10/2019 S 10/10/200 S 10/10/200 S 10/10/200 S 10/10/200
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Final 1.000

Inter-Office Shipment

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IOS Number : **49901**

Date/Time	: 10.10.2019	Created by:	Brenda Ward	1	Please send report to:	Jessica Kram	er		
Lab# From	n: Lubbock	Delivery Priori	ty:		Address:	6701 Aberde	en, Sui	te 9 Lubbock, TX 7942	4
Lab# To:	Houston	Air Bill No.:	77668907654	47	E-Mail:	jessica.krame	er@xen	co.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 SW	W8015MOD_NM	TPH By SW8015 Mod	10.14.2019	10.24.2019	JKR	PHCC10C28 PHCC28C35	
639685-002	S SP-1.1	10.10.2019 11:45 SW	W8015MOD_NM	TPH By SW8015 Mod	10.14.2019	10.24.2019	JKR	PHCC10C28 PHCC28C35	
639685-003	S CS-1.1	10.10.2019 11:50 SW	W8015MOD_NM	TPH By SW8015 Mod	10.14.2019	10.24.2019	JKR	PHCC10C28 PHCC28C35	

Inter Office Shipment or Sample Comments:

Relinquished By:

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renda Ward

Brenda Ward

Date Relinquished: 10.10.2019

Received By:	Travis Simmons
Date Received:	10.11.2019
Cooler Temperature:	2.0



TORIES

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:

Contact:

Nonconformance Documentation

Contacted by :

Date:

Checklist reviewed by:

uaux

Travis Simmons

Date: 10.11.2019

Page 90 of 92

Received by OCD: 2/5/2020 1:22:35 PM



XENCO Laboratories



Prelogin/Nonconformance Report- Sample Log-In

Client: Terracon-Lubbock	Acceptable Temperature Range: 0 - 6 degC				
Date/ Time Received: 10/10/2019 04:30:00 PM	Air and Metal samples Acceptable Range: Amb				
Work Order #: 639685	Temperature Measuring device used	1: IR-4			
Sample Recei	pt Checklist Comme	ents			
#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?	Νο				
#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 sen	t 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

Checklist reviewed by: Jessica Kramer

Date: 10/13/2019

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.