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

State of New Mexico
Energy Minerals and Natural Resources Department

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

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

Incident ID	NRM2004951274
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 32.816911 Longitude -103.870555
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Skelly 704	Site Type: Lease Road
Date Release Discovered: 12/27/2019	API# *(if applicable):*

Unit Letter	Section	Township	Range	County
P	21	17S	31E	Eddy

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

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls): 8 bbls	Volume Recovered (bbls): 6 bbls
☒ Produced Water	Volume Released (bbls): 72 bbls	Volume Recovered (bbls): 50 bbls
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release:
Flow line was shot by a shotgun.

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State of New Mexico
Oil Conservation Division

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Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? Release volume was greater than 25 bbls.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? The Field Supervisor called and left a message with Mike Bratcher at 575-626-0857 within 1 hour of discovering the leak	

Initial Response

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

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

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

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

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

Printed Name: Brett Dennis
Title: Staff Scientist
Signature:
Date: 02/18/2020
email: brett.dennis@terracon.com
Telephone: (806) 300-0140

OCD Only

Received by:
Date:

State of New Mexico
Oil Conservation Division

Incident ID	NRM2004951274
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Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	60 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

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

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

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

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

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State of New Mexico
Oil Conservation Division

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

Printed Name: Joseph Guesnier Title: Staff Scientist

Signature: Date: 2-26-2021

email: JRGuesnier@Tetratech.com Telephone: 806 544 9276

OCD Only

Received by: Date:

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Oil Conservation Division

Incident ID	NRM2004951274
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Remediation Plan

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

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

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

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

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

Printed Name: Joseph Guesnier Title: Staff Scientist

Signature: Date: 2-26-2021

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

OCD Only

Received by: Date:

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

Signature: Date:

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State of New Mexico
Oil Conservation Division

Incident ID	NRM2004951274
District RP	
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Application ID	

Closure

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

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

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

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

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

☒ Description of remediation activities

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

Printed Name: Joseph Gregnier Title: Staff Scientist

Signature: Date: 2-26-2021

email: JRGregnier@Ramboll.com Telephone: 505 544 9276

OCD Only

Received by: Chad Hensley Date: 06/10/2021

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

Closure Approved by: Chad Hensley Date: 06/10/2021

Printed Name: Chad Hensley Title: Environmental Specialist Advanced

Closure Report

General Site Information
Skelly 704
NMOCD Reference No. nRM2004951274
Terracon Project No. AR197355

Site Contact
Mr. Todd Mucha, Spur Energy Partners
920 Memorial City Way, Suite 1000, Houston, Texas 77024
(281) 795-2286

Depth to Ground Water
Between 50 - 100 feet below grade surface

Distance to Nearest Surface Water
Laguna Plata (Central-western Lea County, NM), approximately 16.27 miles to the Southeast

Driving Directions
From Hwy 249, West 8.2 miles on Hwy 82, Turn north onto CR 223,
North 0.13 mile, to release location.

Legal Description
Unit P, Section 21, T17S, R31E, Eddy County, New Mexico

Prepared for:
Spur Energy Partners
Houston, Texas

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

Terracon

December 8, 2020

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

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

RE: **Closure Report**
Skelly 704
Unit P, Section 21, Township 17 South, Range 31 East
Eddy County, New Mexico
NMOCD Reference No. nRM2004951274
Terracon Project No. AR197355

Dear Mr. Mucha,

Terracon Consultants, Inc. (Terracon) is pleased to submit our Closure Report for the site referenced above. The Closure, and closure activities were executed in accordance with the New Mexico Oil Conservation Division (NMOCD) regulations concerning clean-up actions required for releases of crude oil and produced water. Based on the release investigation assessment, Terracon recommended the following actions be taken to achieve protection of fresh water and the environment in accordance with NMOCD regulations. Terracon developed the Closure Report in general accordance with our proposal (AR197355) dated February 2, 2020.

- Based on the magnitude of chloride and hydrocarbon concentrations detected within the release margins to depths subject to NMOCD Reclamation requirements, approximately 330 cubic yards (cy) of chloride and Total Petroleum Hydrocarbons (TPH) impacted material was anticipated to be excavated and disposed of at a permitted disposal facility under manifest.

- Alternatively, Terracon proposed periodic sampling to assess the possibility of natural attenuation, with consideration for the sites preferential conditions that would lend to the natural attenuation of the previously detected contaminants.

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

Sincerely,
Terracon Consultants, Inc.

Joseph Guesnier	Erin Loyd, P.G.
Staff Scientist	Principal
Lubbock	Office Manager - Lubbock

Terracon

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APPENDIX E – Standard of Care, Limitations, and Reliance Policies

Closure Report
Skelly 704
NMOCD Ref No. nRM2004951274
Unit J, Section 21, Township 17 South, Range 31 East
Eddy County, New Mexico
Terracon Project No. AR197355
December 8, 2020

1.0 SITE DESCRIPTION

The site was comprised of a down gradient 0.1-mile long release with widths varying between 4 and 30 ft. wide along its extent within the Unit Letter P, Section 21, Township 17 South, Range 31 East, Eddy County, New Mexico and extending into Unit Letter P of the same section (hereinafter, the site). The site consisted primarily of a paved lease road (Sweet Gum Road) with the origin of the release being a hole in a 2-inch poly pipeline. A Topographic Map illustrating the site location is included as Exhibit 1 and a Site Diagram illustrating initial soil sample locations is included as Exhibit 2 in Appendix A. A water well record search is also included as New Mexico Office of the State Engineer (NMOSE) Point of Diversion (POD) Location Map as Exhibit 7 in Appendix A.

2.0 SCOPE OF SERVICES

Terracon Consultants Inc. (Terracon) scope of services was to investigate the magnitude and extent of the documented release and develop a Release Investigation and Remedial Action Plan (RAP) in accordance with the New Mexico Oil Conservation Division (NMOCD) and Bureau of Land Management (BLM) requirements that detail site closure activities to be completed. This closure addresses the December 27, 2019 release of approximately 80 barrels (bbls) of produced water which contained an estimated 8 bbls of crude originating from a hole on a 2-inch pipeline on a Spur Energy Partners LLC (Spur) pipeline.

3.0 INTRODUCTION AND NOTIFICATION

A release of approximately 80 bbls of produced water which contained an estimated 8 bbls of crude oil occurred on December 27, 2019 at the Skelly 704 site in Eddy County, New Mexico. The site is operated by Spur Energy Partners LLC, and is comprised of an approximate 3-acre paved road, approximately 6 miles east of Loco Hills, New Mexico. Incident information is provided in the following table:

Required Information	Site and Release information	
Responsible Party	The Produced Water Line is operated by Spur Energy Partners LLC	
Local Contact	Contact: Mr. Todd Mucha	P: (281) 795-2286 E: todd@spurepllc.com
NMOCD Notification	Notice of the release was provided to spill@blm.gov by Jerry Mathews (Spur) on December 27, 2019.	
Facility Description	The Skelly 704 poly line is in Eddy County, New Mexico. It is an approximate 3-acre area located within Unit J and P, Section 21, Township 17 South, Range 31 East, approximately 6 miles east of Loco Hills, New Mexico. The site is being developed as a county road.	
Time of Incident	December 27, 2019, discovered at 10:00 a.m.	
Discharge Event	A 2-inch poly line was reportedly shot by a hunter allowing produced water to be released. At the release point, released fluid saturated proximal surface soil before pooling, then flowing west onto the paved road, which trends to the south-southeast and encountered blow sand that had accumulated on the road before terminating 600 feet south of the original release. The release margins are illustrated on Figure 2 of Appendix A	
Type of Discharge	The documented fluids release occurred at the surface and appears to be limited to near surface soils.	
Quantity of Spilled Material	Total Fluids Released: 80 bbls	Produced Water: 80 bbls which contained an estimated 8 bbls of crude oil
	Total Fluids Recovered: 70 bbls	Produced Water: 63 bbls Crude Oil: 7 bbls
Site Characteristics	Relatively flat topography with the native ground surface very gently sloping to the southeast.	
Immediate Corrective Actions	Pipeline was shut in, and an onsite Spur Contractor (C2) vac truck picked up all standing liquid.	

4.0 INITIAL RESPONSE ACTIONS

4.1 Source Elimination and Site Security

Initial source elimination was accomplished by the Spur Energy Partners foreman shutting in the leaking line and repairing the punctured line. Spur Energy Partners enlisted a third-party contractor, to secure the site and perform containment and site stabilization activities.

4.2 Containment and Site Stabilization

Pressure Services hydro vacuumed at the poly line release and a Spur crew repaired the line, approximately 70 bbls of produced water was recovered from an area measuring approximately 14,000 square feet (sf). Impacted material was left in place for environmental assessment.

5.0 GENERAL SITE CHARACTERISTICS

5.1 Depth to Groundwater

A water well record search of the NMOSE POD Geographic Information System (GIS) data portal identified one registered well (RA-11590-POD3) within 1.8 miles of the site. This well was registered to have water at 60 feet below grade surface. The depth to groundwater at the site is anticipated to be greater than 50 feet bgs but less than 100 feet bgs. NMOSE registered wells within a 5-mile radius of the site has an average depth to groundwater of 86 feet bgs, with a minimum reported groundwater depth of 55 feet bgs (Exhibit 7 of Appendix A).

5.2 Distance to Nearest Potable Water Well

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

5.3 Distance to Nearest Surface Water

The Brainard Lake is located approximately 26.3 miles west of the site.

5.4 Soil Characteristics

Soils at the site are mapped as Pajarito loamy, fine sand, 0 to 3 percent slopes, eroded. This soil has a surface layer of fine- to coarse-grained sand. While the Pajarito is comprised of fine- to coarse-grained sands at the surface and to depth, restrictive features are greater than 80 inches bgs resulting in the formation being categorized with a very low runoff classification.

5.5 Groundwater Quality

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

6.0 SOIL REMEDIAL ACTION LEVELS

Produced water facilities in New Mexico are generally regulated by the NMOCD. Terracon proposed to remediate impacted soil from the Stella Blue produced water 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 a total ranking score based on the depth to groundwater, distance to private and domestic water sources, and the distance to the nearest surface water body as illustrated in table 1 of Appendix B.

6.1 Reclamation Levels

NMOCD remediation action limits for Chlorides, TPH (GRO+DRO+MRO), GRO+DRO, BTEX (includes benzene, toluene, ethylbenzene and xylenes), and Benzene are selected based on the minimum depth below any point within the horizontal boundary of the release to groundwater of being ≤50 feet: (NMOCD) regulation concerning Restoration, Reclamation, and Re-vegetation (19.15.29.13 NMAC – D (Reclamation of areas no longer in use)).

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

7.0 SOIL SAMPLING PROCEDURES

Soil sampling procedures are detailed as follows:

7.1 Soil Sampling Procedures for Laboratory Analysis

Soil Sampling Procedures

The collection of soil sampling for laboratory analysis were conducted in accordance with 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 Deceomber 30, 2019, and January 9, 2020 release investigation activities, a total of 15 soil samples were collected from the site and analyzed for BTEX, chloride, and/or TPH. Twelve samples were collected from within the release margins; three samples were collected outside of the impacted area to evaluate background concentrations. A Soil Contaminant Concentration Map illustrating the soil sample locations and contaminant concentrations is included as Exhibit 3 in Appendix A.

8.1 Background Data Evaluation

The background samples analyzed for did not exhibit Benzene or Total BTEX concentrations above applicable laboratory sample detection limits (SDLs).

Chloride was detected above applicable laboratory SDLs in each of the analyzed background samples. The chloride concentrations ranged from 10.7 mg/kg in soil sample HA-7 (1.5 to 2 ft. bgs) to 41.4 mg/kg in soil sample HA-7 (surface to 0.5 ft. bgs). Detected concentrations for chloride in background samples did not exceed NMOCD Action Levels based on the criteria ranking parameters. Based on the analytical results of the background samples, NMOCD Action Levels will continue to be utilized as the applicable Remedial Action Levels (RALs) for the site.

The background samples analyzed for Total TPH did not exhibit concentrations above applicable SDLs.

8.2 Release Margins Data Evaluation

Benzene was detected above applicable laboratory SDLs in two of the 12 soil samples analyzed within the release margins. The Benzene concentrations ranged from 0.216 mg/kg in soil sample HA-6 (0.5 to 1 ft. bgs) to 10.5 mg/kg in soil sample HA-6 (surface bgs to 0.5 ft. bgs). The detected benzene concentrations did not exceed the applicable NMOCD RAL for benzene of 10 mg/kg, with soil sample HA-6 (surface to 0.5 ft. bgs) being the exception, as summarized in Table 1.

Total BTEX was detected above applicable laboratory SDLs in three of the 12 soil samples analyzed within the release margins. The Total BTEX concentrations ranged from 8.73 mg/kg in soil sample HA-6 (1.5 ft. bgs to 2 ft. bgs) to 498 mg/kg in soil sample HA-6 (surface to 0.5 ft. bgs). The detected Total BTEX concentrations did not exceed the applicable NMOCD RAL for Total BTEX of 50 mg/kg, with the soil sample HA-6 (surface to 0.5 ft.bgs) and soil sample HA-6 (0.5 ft. bgs to 1 ft. bgs) being the exceptions, as summarized in Table 1.

Chloride was detected above applicable laboratory SDLs in each of the 12 soil samples analyzed within the release margins. The chloride concentrations ranged from 41.5 mg/kg in soil sample HA-5 (Surface to 0.5 ft. bgs) to 8,460 mg/kg in soil sample HA-4 (Surface to 0.5 ft. bgs). The soil samples analyzed within the release margins did exhibit chloride concentrations exceeding the applicable NMOCD RAL for chloride of 600 mg/kg, with soil sample HA-3 (1 to 1.5 ft. bgs) and soil sample HA-5 (surface to 0.5 ft. bgs) being the exceptions, as summarized in Table 1.

Total TPH was detected above applicable laboratory SDLs in three of the 12 soil samples analyzed within the release margins. The Total TPH concentrations ranged from 869 mg/kg in soil sample HA-6 (1.5 to 2.0 ft. bgs) to 6,895 mg/kg in soil sample HA-6 (surface to 0.5 ft. bgs). The soil samples analyzed within the release margins did exhibit Total TPH concentrations above the NMOCD RAL of 100 mg/kg for Total TPH, as summarized in Table 1.

8.3 Release Investigation Data Summary

Based on the review of the above release investigation analytical results, the areas within the release margins exhibit concentrations of benzene, Total BTEX, chloride and Total TPH in multiple locations, with HA-5 being the exception. Based on these exceedances above NMOCD RALs, Sections 9.0 and subsequent detail recommended remedial response actions to be implemented at the site.

9.0 SUPPLEMENTAL RELEASE INVESTIGATION DATA EVALUATION

During Terracon's July 22, 2020 and November 20, 2020 supplemental release investigation activities, a total of twelve soil samples were collected from the site and analyzed for chloride, Benzene, BTEX, and TPH. 12 samples were collected from within the release margins. A Soil

Contaminant Concentration Map illustrating the soil sample locations and contaminant concentrations is included as Exhibit 6 in Appendix A.

9.1 Supplemental Release Margins Data Evaluation

Chloride was detected above applicable laboratory SDLs in 11 of the 12 soil samples analyzed within the release margins. The chloride concentrations ranged from 8.39 mg/kg in soil sample CS-6 (surface to 0.5 ft. bgs) to 467 mg/kg in soil sample CS-2 (0.5 to 1 ft. bgs). The soil samples analyzed within the release margins did not exhibit chloride concentrations exceeding the applicable NMOCD RAL for chloride of 600 mg/kg, as summarized in Table 1.

The confirmation samples analyzed for Total TPH did not provide concentrations above the applicable laboratory SDLs.

10.0 SOIL REMEDIATION & RECLAMATION

Soils exhibiting elevated chloride and TPH impacts observed during the initial investigation, have naturally attenuated with time as evidenced from the data collected. This reduction is illustrated in Exhibit 6 in appendix A. Two additional sampling events of the release flow path supported by laboratory data from a supplemental investigation, resampled soils within the release margins have achieved regulatory objectives in accordance with NMOCD standards for Remediation, and Reclamation. The criteria described below were utilized to track contaminants to provide a more detailed plan, to ensure remedial efforts were appropriately concentrated throughout the release area.

10.1 Monitored Natural Attenuation

Soils exceeding the designated NMOCD RALs described in Section 6 were tracked as follows:

- Soils within the release margins, illustrated on Figure 2 of Appendix A, were found to reside on a solid barrier provided by the paving of Sweet Gum Road, areas of pooling on and around the road were identified to minimize the removal of soil not containing, earthen material with chloride concentrations less than 600 mg/kg.
- Rainfall, heat and the natural slope of the provided for a preferential pathway to expose and disperse any remaining contaminates.
- Terracon's supplemental release investigation data demonstrated soils within the release margins were mitigated to concentrations consistent with background chloride levels and no samples over the 600 mg/kg remediation level.
- Terracon at this time has found no further contaminates above the NMOCD RALs and recommends no further remedial efforts at this site.

10.2 Soil Management

The selected method of soil management was removal and disposal at a NMOCD-approved facility. Excavated soils were to 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. Following the monitoring of soils within the release margins demonstrated no need for removal or disposal of soils. Natural attenuation proved to be the most effective method to achieve the goals of protecting human health, the environment, and adequate protection of Groundwater.

11.0 TERMINATION OF REMEDIAL ACTIONS, FINAL CLOSURE AND REPORTING

11.1 Termination of Remedial Action

Remedial action of soils at the site were terminated when the following criteria were met.
Contaminated soils were reevaluated at the site. Terracon returned to resample the site following the data from the full site analysis and identifying the preferential pathways for natural attenuation, it was observed that contaminated soil had naturally attenuated from the site. The residual contaminant concentrations are below the soil remediation action levels and no longer require any remdial action.

- Considering the distance to groundwater to be greater than 60 ft bgs and the natural topography that assisted in the migration from the release location into a natural drainage area, provided for rapid and efficient natural attenuation.
- Terracon, relying on the supplemental laboratory analysis, and visual observation; believes that the natural attenuation at the site was achieved by dilution, dispersion, and volatilization of the previously impacted soils.
- Considering that the previous samples that were above NMOCD RALs were not substantial, it must be the natural rainfall and movement of that water, following the same release path that did naturally attenuate the previously observed contaminates.
- NMOCD 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 is warranted at this time.

11.2 Final Closure

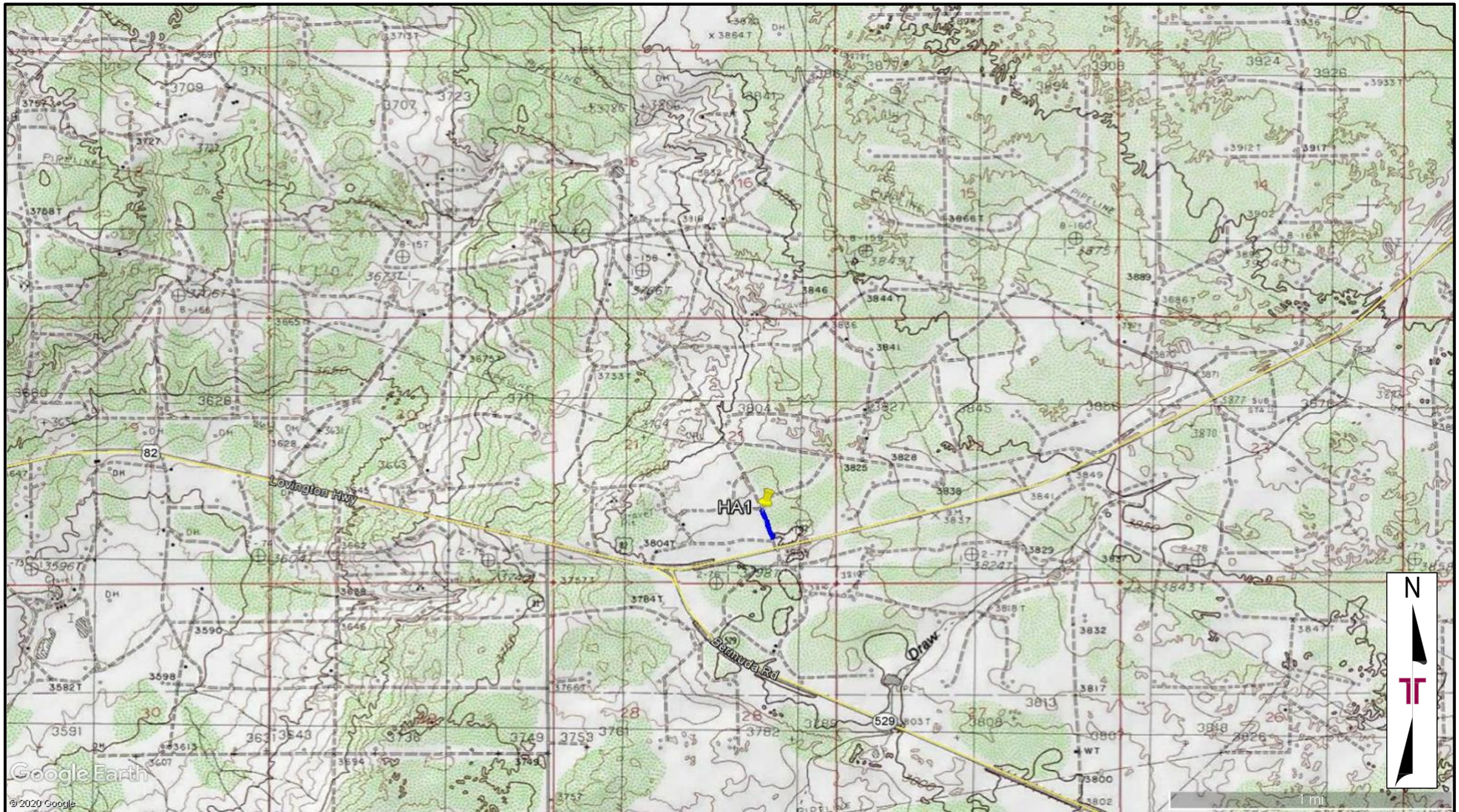
Upon termination of the supplemental investigation the area of the release has been closed by confirmation sampling to demonstrate the absences of contaminates above the NMOCD RALs.

11.3 Final Report

Upon completion of supplemental investigation activities, this final report summarizes all actions taken to mitigate environmental damage related to the release and has been provided to NMOCD for approval.

APPENDIX A – Exhibits

Exhibit 1 – Topographic Map
Exhibit 2 – Site Diagram
Exhibit 3 – Soil Contaminant Concentration Map
Exhibit 4 – Supplemental Soil Concentration Map
Exhibit 5 – NMOE POD Location Map
Exhibit 6 – Karst Map

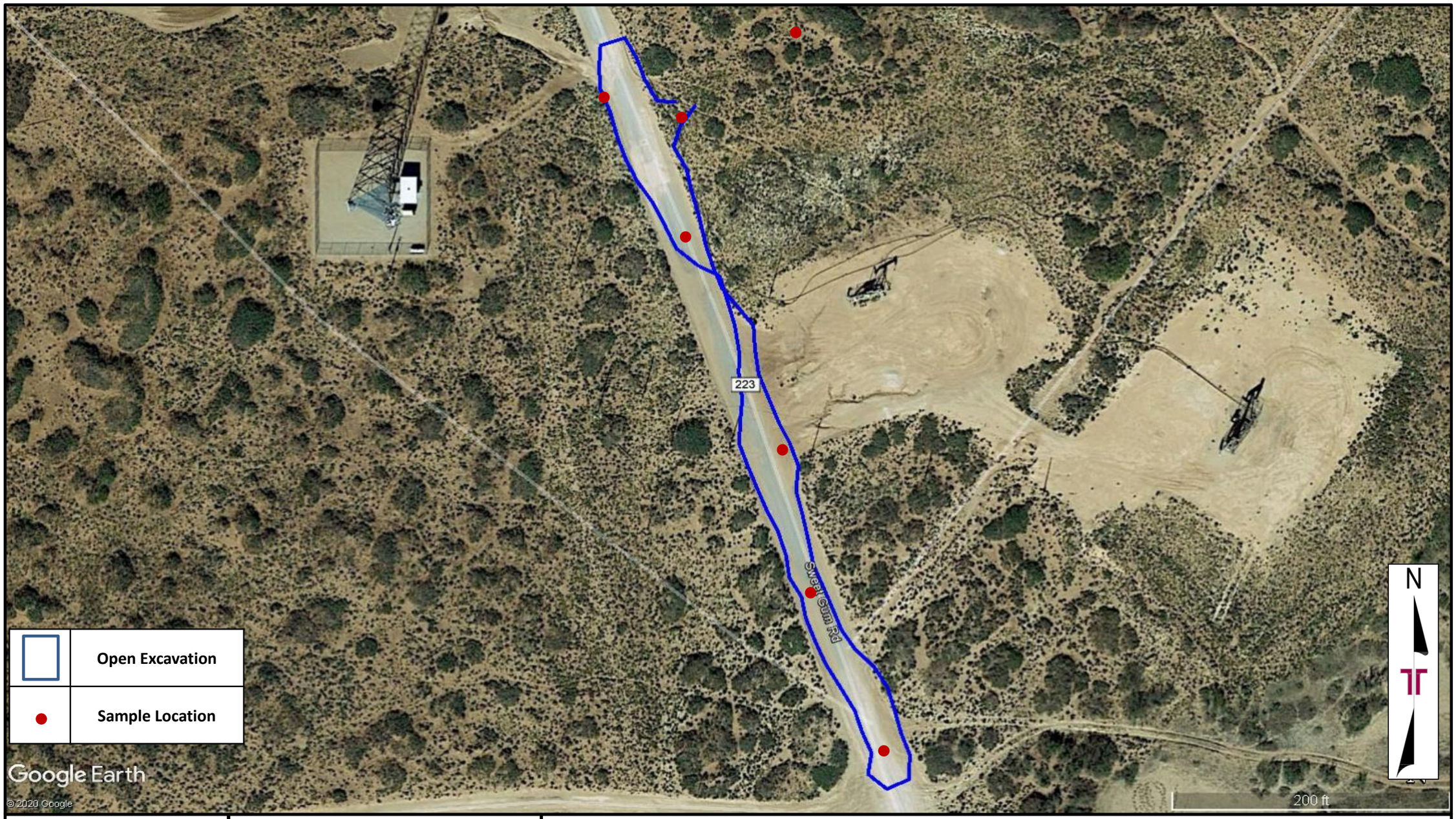


Project No.	AR197355
Scale:	As Shown
Source:	USGS
Date:	2014

Terracon
Consulting Engineers & Scientists
5847 50th St. Lubbock, Texas 79424
PH. (806) 300-0104 FAX. (806) 797 0947

Exhibit 1 – Topographic Map

Skelly 704 Release
32.816127°, -103.870286°
Eddy County, New Mexico

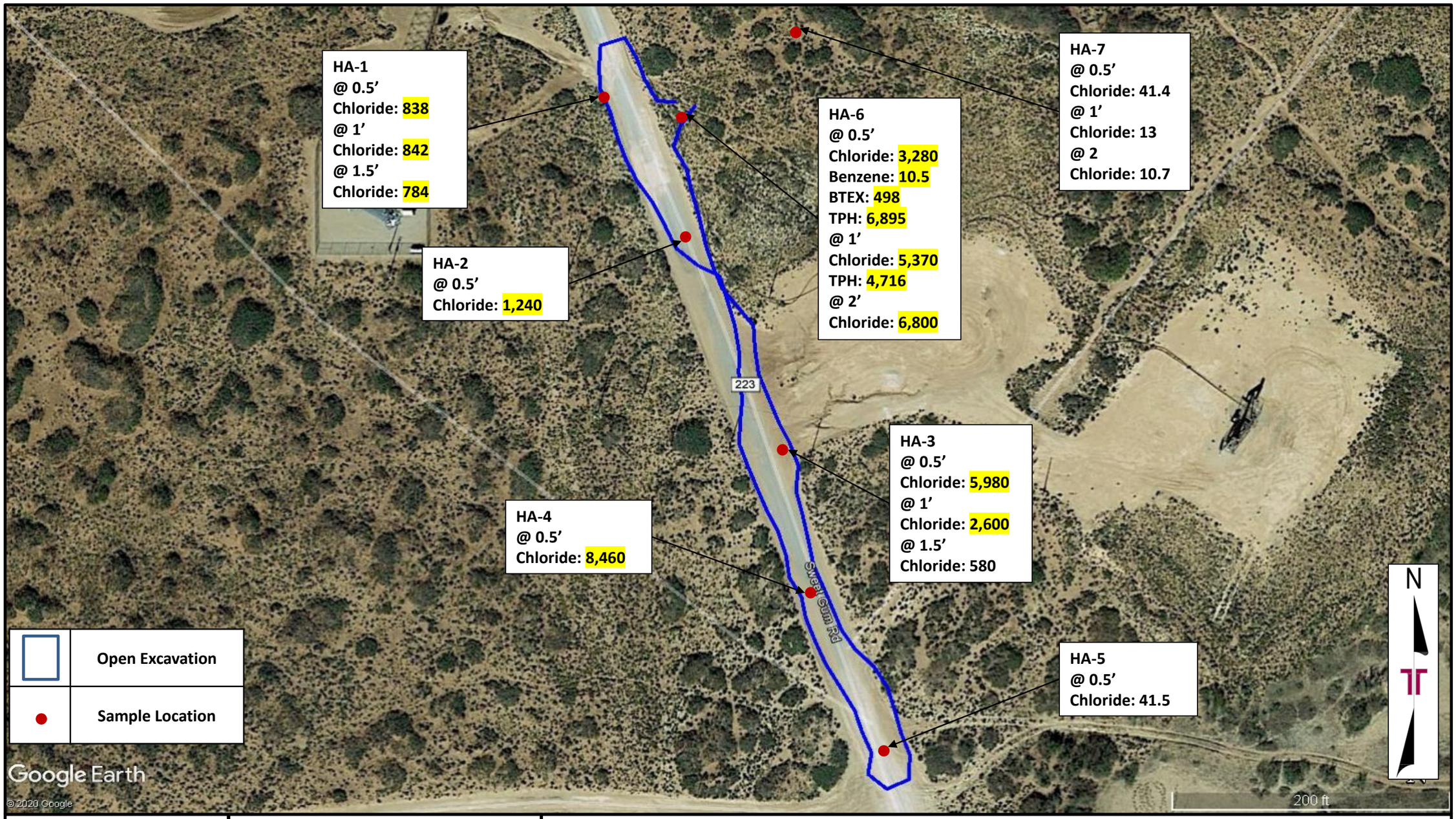


Project No.	AR197355
Scale:	As Shown
Source:	Google Earth
Image Date:	11/02/2017

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

Exhibit 2 – Site Map

Skelly 704
32.816127°, -103.870286°
Eddy County, New Mexico

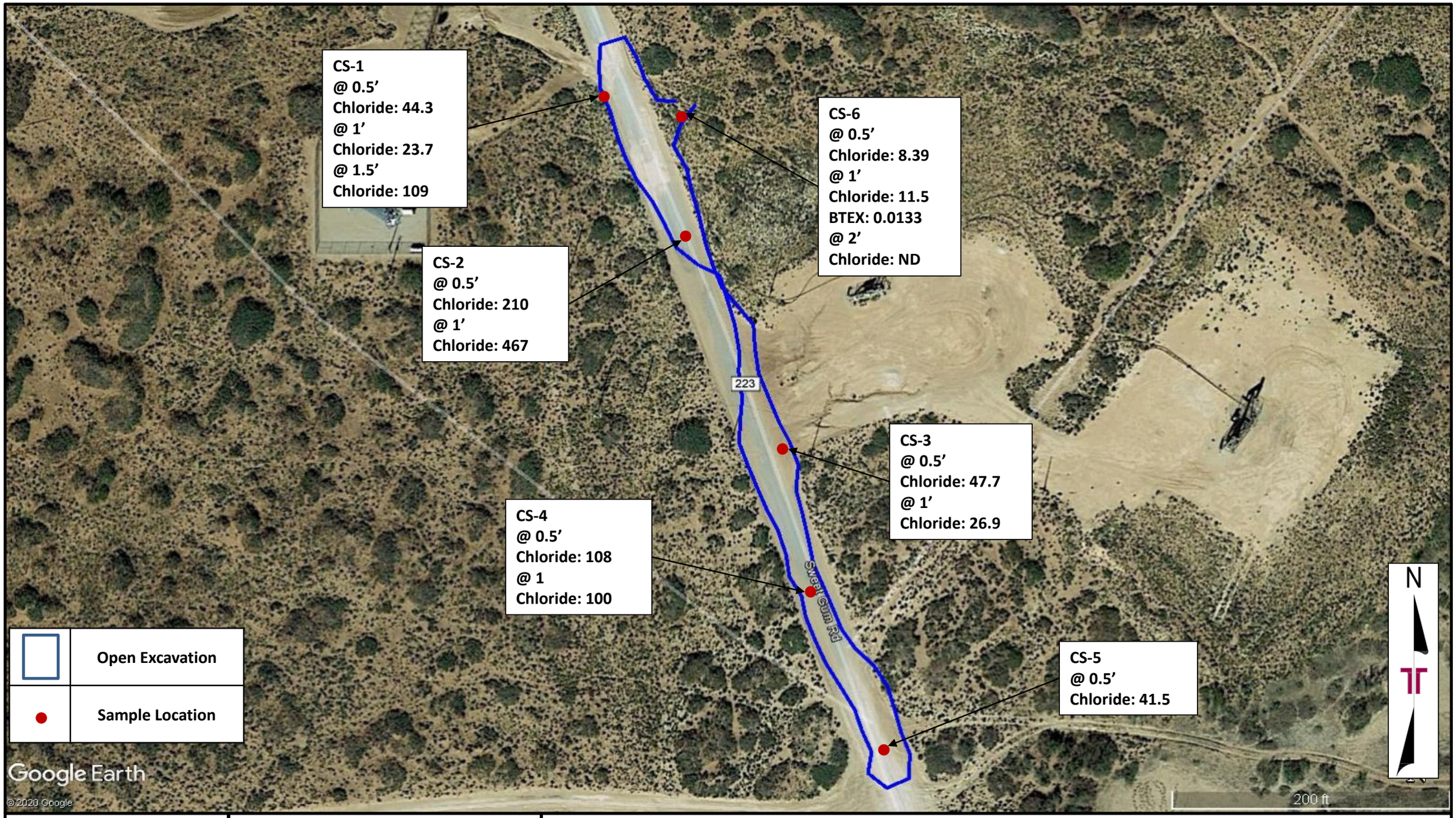


Project No.	AR197355
Scale:	As Shown
Source:	Google Earth
Image Date:	11/02/2017

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

Exhibit 3 – Soil Contamination Concentration Map

Skelly 704
32.816127°, -103.870286°
Eddy County, New Mexico



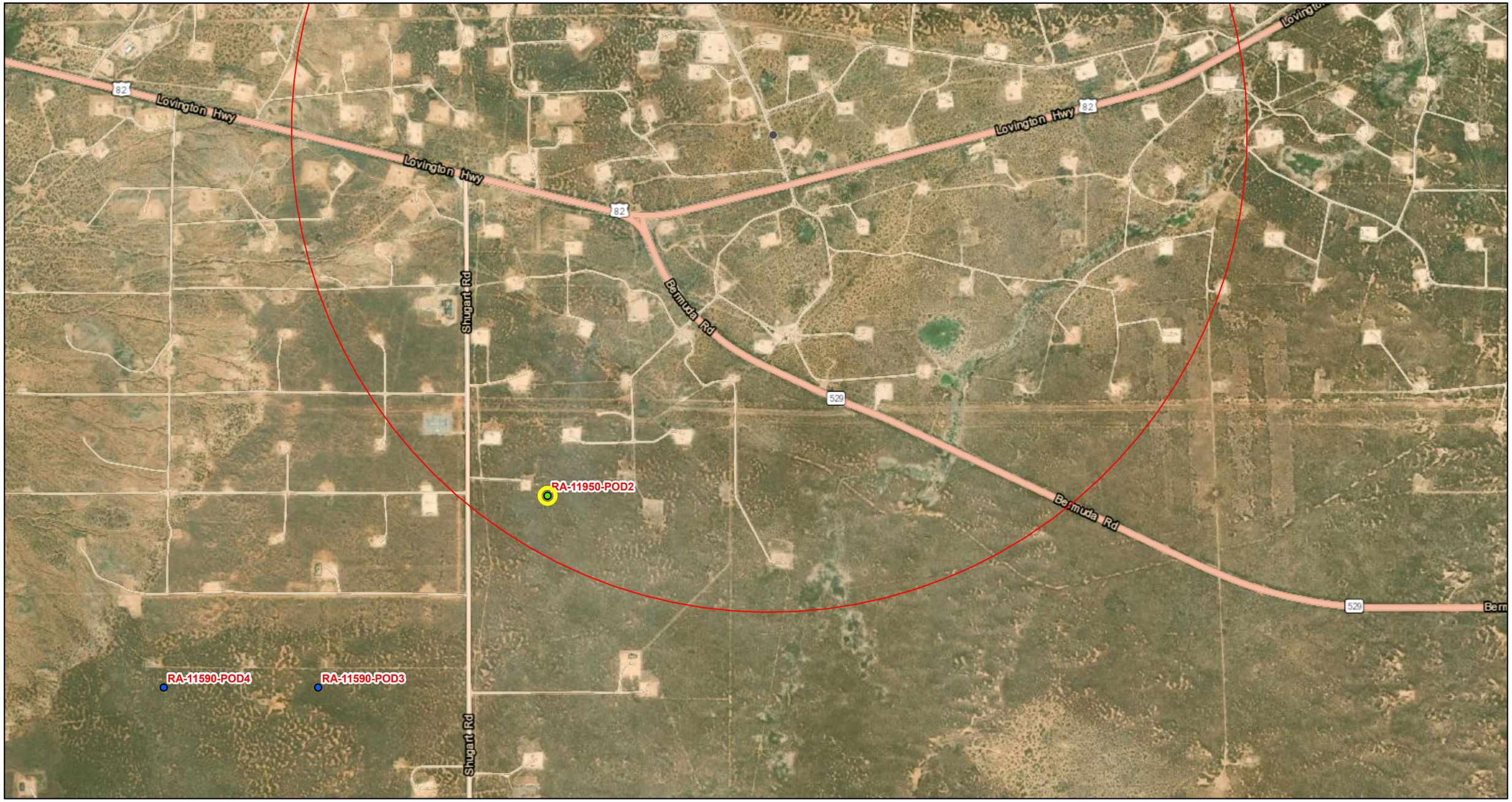
Project No.	AR197355
Scale:	As Shown
Source:	Google Earth
Image Date:	11/02/2017

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

Exhibit 4 – Supplemental Soil Concentration Map

Skelly 704
32.816127°, -103.870286°
Eddy County, New Mexico

Exhibit 5 - NMOE POD Location Map



12/2/2020 11:42:30 AM

GIS WATERS PODs

- Active
- Pending
- OSE District Boundary
- SiteBoundaries

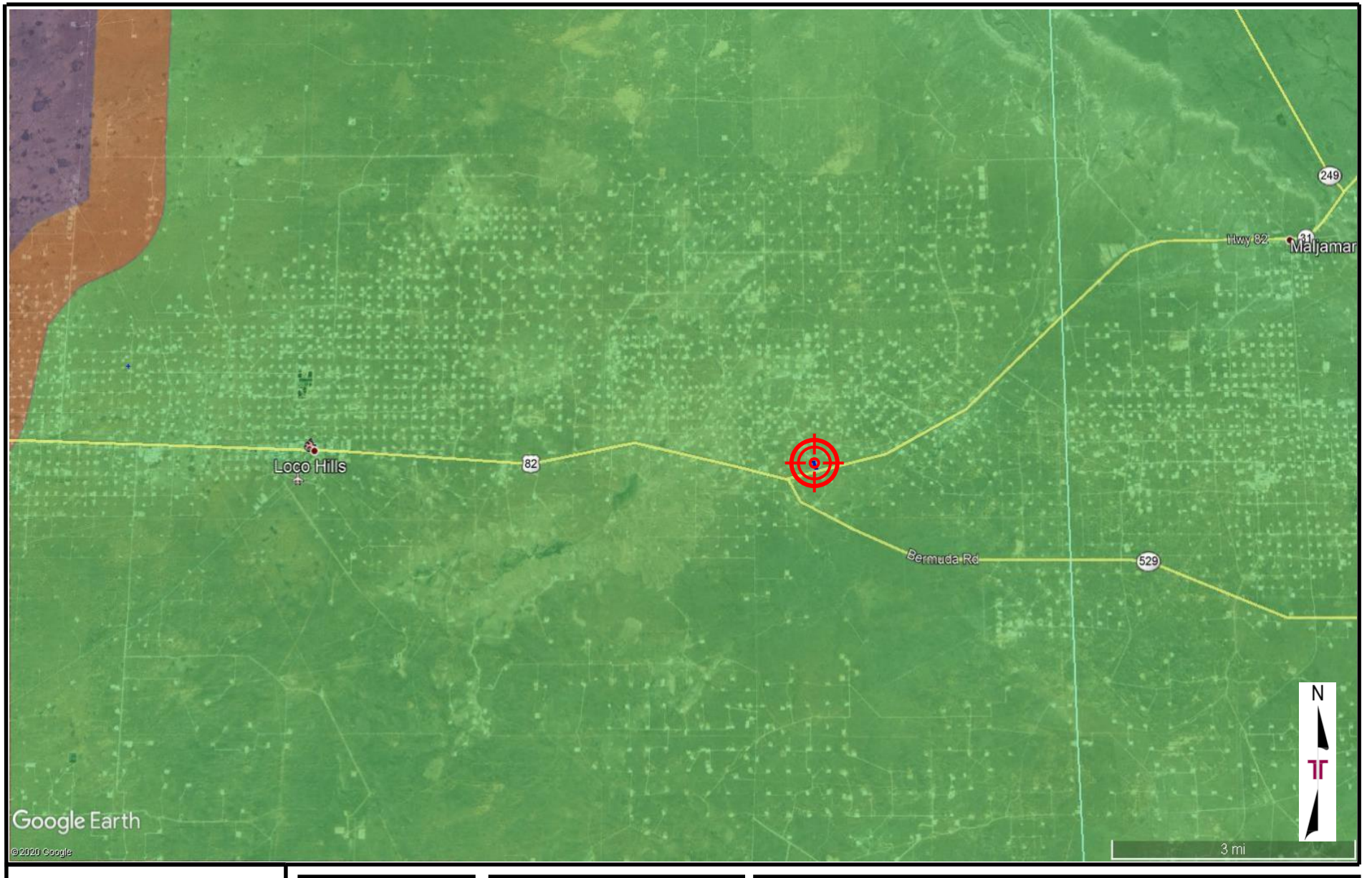
1:18,056

0 0.17 0.35 0.7 mi

0 0.3 0.6 1.2 km

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

OSE POD Locations



Site Location

Project No.	AR197355
Scale:	As Shown
Source:	ESRI
Date:	02/04/2020

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

Exhibit 6 - Cave Karst Public UCP

Skelly 704

32.816127, -103.870286

Eddy County, New Mexico

APPENDIX B – Tables

Table 1 – NMOCD Closure Criteria for Soils Impacted by a Release
Table 2 – Soil Sample Analytical Data Summary

Table 1			
NMOCD Closure Criteria for Soils Impacted by a Release			
Minimum depth below any point within the horizontal boundary of the release to ground water less than 10,000 mg/L TDS	**Constituent**	**Method***	**Limit****
≤50 feet	Chloride***	EPA 300.0 or SM4500 Cl B	600 milligram per kilogram (mg/kg)
	TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015 M	100 mg/kg
	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 Method 8021B or 8260B	50 mg/kg
51 feet-100 feet	Chloride***	EPA 300.0 or SM4500 Cl B	10,000 mg/kg
	TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015 M	2,500 mg/kg
	GRO+DRO	EPA SW-846 Method 8015 M	1,000 mg/kg
	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 Method 8021B or 8260B	10 mg/kg
>100 feet	Chloride***	EPA 300.0 or SM4500 Cl B	20,000 mg/kg
	TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015 M	2,500 mg/kg
	GRO+DRO	EPA SW-846 Method 8015 M	1,000 mg/kg
	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 Method 8021B or 8260B	10 mg/kg

**Or other methods approved by the division*

***Numerical limits or natural background level, whichever is greater*

****This applies to releases of produced water or other fluids, which may contain chloride*

TABLE 2
SOIL SAMPLE ANALYTICAL RESULTS - BTEX[1], Chloride[2], and TPH[3]
Skelly 704
Terracon Project No. AR197355

Sample I.D.	Sample Depth (ft. bgs)	Sample Type	Sample Date	BTEX (mg/kg)	Chloride (mg/kg)	TPH (8015M) (mg/kg)			
						GRO	DRO	ORO	TOTAL
Release Margin Samples (Off Pad)									
HA-1	0 - 0.5	Grab	12/30/19	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	**838**	ND	ND	ND	ND
	0.5 - 1	Grab	12/30/19	Benzene - NA Toluene - NA Ethylbenzene - NA Total Xylenes - NA Total BTEX - NA	**842**	ND	ND	ND	ND
	1 - 1.5	Grab	12/30/19	Benzene - NA Toluene - NA Ethylbenzene - NA Total Xylenes - NA Total BTEX - NA	**784**	ND	ND	ND	ND
HA-2	0 - 0.5	Grab	12/30/19	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	**1,240**	ND	ND	ND	ND
HA-3	0 - 0.5	Grab	12/30/19	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	**5,980**	ND	ND	ND	ND
	0.5 - 1	Grab	12/30/19	Benzene - NA Toluene - NA Ethylbenzene - NA Total Xylenes - NA Total BTEX - NA	**2,600**	ND	ND	ND	ND
	1 - 1.5	Grab	12/30/19	Benzene - NA Toluene - NA Ethylbenzene - NA Total Xylenes - NA Total BTEX - NA	580	ND	ND	ND	ND
HA-4	0 - 0.5	Grab	12/30/19	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	**8,460**	ND	ND	ND	ND
HA-5	0 - 0.5	Grab	12/30/19	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	41.5	ND	ND	ND	ND
NMOCD Reclamation Standards[4] **(Applicable for Soils from the Surface to 4 ft. Below Grade Surface)**				**Benzene - 10** **Toluene - N/A** **Ethylbenzene - N/A** **Total Xylenes - N/A** **Total BTEX - 50**	**600**	**N/A**			**100**
NMOCD Remediation and Delineation Standards[5] **(Applicable for Soils at Depths Greater than 4 ft. Below Grade Surface)**				**Benzene - 10** **Toluene - N/A** **Ethylbenzene - N/A** **Total Xylenes - N/A** **Total BTEX - 50**	**10,000**	**1,000**		**N/A**	**2,500**

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

< = Constituent not detected above the indicated laboratory SDL

NA = Not Analyzed

ND = Non Detected

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

TABLE 2
SOIL SAMPLE ANALYTICAL RESULTS - BTEX[1], Chloride[2], and TPH[3]
Skelly 704
Terracon Project No. AR197355

Sample I.D.	Sample Depth (ft. bgs)	Sample Type	Sample Date	BTEX (mg/kg)	Chloride (mg/kg)	TPH (8015M) (mg/kg)			
						GRO	DRO	ORO	TOTAL
Release Margin Samples (Off Pad)									
HA-6	0 - 0.5	Grab	01/09/20	Benzene - **10.5** Toluene - 148 Ethylbenzene - 166 Total Xylenes - 173 Total BTEX - **498**	**3,280**	**6,520**	**375**	<149	**6,895**
	0.5 - 1	Grab	01/09/20	Benzene - 0.216 Toluene - 13.7 Ethylbenzene - 22.7 Total Xylenes - 25.9 Total BTEX - **62.5**	**5,370**	**896**	**3,820**	<74.4	**4,716**
	1.5 - 2	Grab	01/09/20	Benzene - ND Toluene - 0.832 Ethylbenzene - 3.47 Total Xylenes - 4.43 Total BTEX - 8.73	**6,800**	130	739	<37.5	**869**
Background Samples (Off Pad)									
HA-7	0 - 0.5	Grab	01/09/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	41.4	ND	ND	ND	ND
	0.5 - 1	Grab	01/09/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	13	ND	ND	ND	ND
	1.5 - 2	Grab	01/09/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	10.7	ND	ND	ND	ND
Confirmation Samples (Off Pad)									
CS-1	0 - 0.5	Comp	07/22/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	44.3	ND	ND	ND	ND
	0.5 - 1	Comp	07/22/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	23.7	ND	ND	ND	ND
	1.5 - 2	Comp	07/22/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	109	ND	ND	ND	ND
NMOCD Reclamation Standards[4] **(Applicable for Soils from the Surface to 4 ft. Below Grade Surface)**				**Benzene - 10** **Toluene - N/A** **Ethylbenzene - N/A** **Total Xylenes - N/A** **Total BTEX - 50**	**600**	**N/A**			**100**
NMOCD Remediation and Delineation Standards[5] **(Applicable for Soils at Depths Greater than 4 ft. Below Grade Surface)**				**Benzene - 10** **Toluene - N/A** **Ethylbenzene - N/A** **Total Xylenes - N/A** **Total BTEX - 50**	**10,000**	**1,000**		**N/A**	**2,500**

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

< = Constituent not detected above the indicated laboratory SDL

NA = Not Analyzed

N/A = Not Applicable

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

TABLE 2
SOIL SAMPLE ANALYTICAL RESULTS - BTEX[1], Chloride[2], and TPH[3]
Skelly 704
Terracon Project No. AR197355

Sample I.D.	Sample Depth (ft. bgs)	Sample Type	Sample Date	BTEX (mg/kg)	Chloride (mg/kg)	TPH (8015M) (mg/kg)			
						GRO	DRO	ORO	TOTAL
Confirmation Samples (Off Pad)									
CS-2	0 - 0.5	Comp	07/22/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	210	ND	ND	ND	ND
	0.5 - 1	Comp	07/22/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	467	ND	ND	ND	ND
CS-3	0 - 0.5	Comp	07/22/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	47.7	ND	ND	ND	ND
	0.5 - 1	Comp	07/22/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	26.9	ND	ND	ND	ND
CS-4	0 - 0.5	Comp	07/22/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	108	ND	ND	ND	ND
	0.5 - 1	Comp	07/22/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	100	ND	ND	ND	ND
CS-6	0 - 0.5	Comp	11/10/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	8.39	ND	ND	ND	ND
	0.5 - 1	Comp	11/20/20	Benzene - 0.00305 Toluene - 0.00283 Ethylbenzene - 0.00443 Total Xylenes - 0.00302 Total BTEX - 0.0133	11.5	ND	ND	ND	ND
	1.5 - 2	Comp	11/20/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	ND	ND	ND	ND	ND
NMOCD Reclamation Standards[4] **(Applicable for Soils from the Surface to 4 ft. Below Grade Surface)**				**Benzene - 10** **Toluene - N/A** **Ethylbenzene - N/A** **Total Xylenes - N/A** **Total BTEX - 50**	**600**	**N/A**			**100**
NMOCD Remediation and Delineation Standards[5] **(Applicable for Soils at Depths Greater than 4 ft. Below Grade Surface)**				**Benzene - 10** **Toluene - N/A** **Ethylbenzene - N/A** **Total Xylenes - N/A** **Total BTEX - 50**	**10,000**	**1,000**		**N/A**	**2,500**

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

< = Constituent not detected above the indicated laboratory SDL

NA = Not Analyzed

N/A = Not Applicable

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

APPENDIX C

Photographic Log – 11/30/2020

PHOTO 1: View of HA-5, facing west. 12/30/2019

PHOTO 2: View of HA-3, facing south. 12/30/2019

PHOTO 3: View of HA-2, facing southeast. 12/30/2019

PHOTO 4: View of HA-1, facing southeast. 12/30/2019

PHOTO 5: View of CS-6, facing south. 11/10/2020

PHOTO 6: View of natural attenuation and exposed asphalt, facing south. 11/10/2020

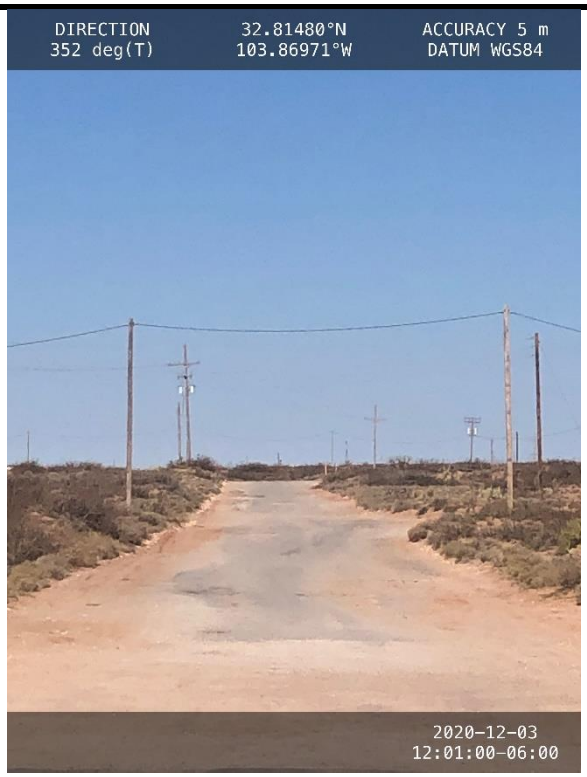


PHOTO 7: View of natural attenuation and exposed asphalt, facing north. 12/3/2020

APPENDIX D

Certified Laboratory Analytical Report and Chain of Custody

Certificate of Analysis Summary 648865

Terracon-Lubbock, Lubbock, TX

Project Name: Skelly 704

Project Id: AR197355
Contact: Joseph Guesnier
Project Location:

Date Received in Lab: Mon Jan-13-20 11:50 am
Report Date: 16-JAN-20
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	648865-001		648865-002		648865-003		648865-004		648865-005		648865-006	
	Field Id:	HA-6 (0-0.5)		HA-6 (0.5-1)		HA-6 (1.5-2)		HA-7 (0-0.5)		HA-7 (0.5-1)		HA-7 (1.5-2)	
	Depth:	0-0.5 ft		0.5-1 ft		1.5-2 ft		0-0.5 ft		0.5-1 ft		1.5-2 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-09-20 11:35		Jan-09-20 11:37		Jan-09-20 11:39		Jan-09-20 11:44		Jan-09-20 11:46		Jan-09-20 11:48	
BTEX by EPA 8021B	***Extracted:***	Jan-14-20 13:30		Jan-14-20 13:30		Jan-14-20 13:30		Jan-14-20 13:30		Jan-14-20 13:30		Jan-14-20 13:30	
	Analyzed:	Jan-15-20 00:23		Jan-15-20 00:47		Jan-15-20 00:00		Jan-14-20 22:47		Jan-14-20 23:11		Jan-14-20 23:35	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		10.5	0.377	0.216	0.196	<0.00854	0.0189	<0.00858	0.0190	<0.00792	0.0175	<0.00863	0.0191
Toluene		148	0.377	13.7	0.196	0.832	0.0189	<0.00444	0.0190	<0.00410	0.0175	<0.00447	0.0191
Ethylbenzene		166 D	3.77	22.7	0.196	3.47	0.0189	<0.00584	0.0190	<0.00539	0.0175	<0.00588	0.0191
m,p-Xylenes		119	0.753	18.0	0.393	2.91	0.0378	<0.00647	0.0380	<0.00597	0.0350	<0.00651	0.0382
o-Xylene		54.2	0.377	7.92	0.196	1.52	0.0189	<0.00647	0.0190	<0.00597	0.0175	<0.00651	0.0191
Total Xylenes		173	0.377	25.9	0.196	4.43	0.0189	<0.00647	0.0190	<0.00597	0.0175	<0.00651	0.0191
Total BTEX		498	0.377	62.5	0.196	8.73	0.0189	<0.00444	0.0190	<0.00410	0.0175	<0.00447	0.0191
Chloride by EPA 300 **SUB: T104704215-19-30**	***Extracted:***	Jan-15-20 10:56		Jan-15-20 10:56		Jan-15-20 10:56		Jan-15-20 10:56		Jan-15-20 10:56		Jan-15-20 10:56	
	Analyzed:	Jan-15-20 15:25		Jan-15-20 15:34		Jan-15-20 15:43		Jan-15-20 15:52		Jan-15-20 16:02		Jan-15-20 16:11	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		3280	9.98	5370	99.6	6800	98.4	41.4	10.1	13.0	10.0	10.7	9.88
DRO-ORO By SW8015B	***Extracted:***	Jan-14-20 13:00		Jan-14-20 13:00		Jan-14-20 13:00		Jan-14-20 13:00		Jan-14-20 13:00		Jan-14-20 13:00	
	Analyzed:	Jan-15-20 16:36		Jan-15-20 17:09		Jan-15-20 17:44		Jan-15-20 18:18		Jan-15-20 18:51		Jan-15-20 19:26	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Diesel Range Organics (DRO)		375 JF	497	3820 F	249	739 F	125	<7.48	25.0	<7.46	24.9	<7.52	25.1
Oil Range Hydrocarbons (ORO)		<149	497	<74.4	249	<37.5	125	<7.48	25.0	<7.46	24.9	<7.52	25.1
TPH GRO by EPA 8015 Mod.	***Extracted:***	Jan-14-20 13:30		Jan-14-20 13:30		Jan-14-20 13:30		Jan-14-20 13:30		Jan-14-20 13:30		Jan-14-20 13:30	
	Analyzed:	Jan-16-20 03:19		Jan-16-20 03:43		Jan-16-20 00:05		Jan-14-20 22:47		Jan-14-20 23:11		Jan-14-20 23:35	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
TPH-GRO		6520	753	896	78.6	130 XF	37.8	<0.257	3.80	<0.237	3.50	<0.259	3.82

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

Jessica Kramer
Project Assistant

Final 1.000

Analytical Report 648865

for

Terracon-Lubbock

Project Manager: Joseph Guesnier

Skelly 704

AR197355

16-JAN-20

Collected By: Client

6701 Aberdeen, Suite 9 Lubbock, TX 79424

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

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

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

16-JAN-20

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

Reference: XENCO Report No(s): **648865**
Skelly 704
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) 648865. 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. 648865 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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Sample Cross Reference 648865

Terracon-Lubbock, Lubbock, TX

Skelly 704

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
HA-6 (0-0.5)	S	01-09-20 11:35	0 - 0.5 ft	648865-001
HA-6 (0.5-1)	S	01-09-20 11:37	0.5 - 1 ft	648865-002
HA-6 (1.5-2)	S	01-09-20 11:39	1.5 - 2 ft	648865-003
HA-7 (0-0.5)	S	01-09-20 11:44	0 - 0.5 ft	648865-004
HA-7 (0.5-1)	S	01-09-20 11:46	0.5 - 1 ft	648865-005
HA-7 (1.5-2)	S	01-09-20 11:48	1.5 - 2 ft	648865-006

CASE NARRATIVE

Client Name: Terracon-Lubbock

Project Name: Skelly 704

Project ID: *AR197355*
Work Order Number(s): *648865*

Report Date: *16-JAN-20*
Date Received: *01/13/2020*

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

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3113251 TPH GRO by EPA 8015 Mod.
Surrogate 4-Bromofluorobenzene recovered below QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 648865-006.

Batch: LBA-3113253 BTEX by EPA 8021B
SW8021BM
Batch 3113253,
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 648865-003,648865-001,648865-002.
Surrogate a,a,a-Trifluorotoluene recovered above QC limits Data confirmed by re-analysis. Samples affected are: 7694380-1-BLK,648879-001 S,648865-005.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3113400 DRO-ORO By SW8015B
Diesel Range Organics (DRO) RPD was outside laboratory control limits.
Samples in the analytical batch are: 648865-001, -002, -003, -004, -005, -006

Matrix spike recoveries and RPDs within Laboratory control limits; therefore the data was accepted.

Surrogate Tricosane recovered below QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 648865-001.
Surrogate n-Triacontane recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 648865-002,648865-003.

CASE NARRATIVE

Client Name: Terracon-Lubbock

Project Name: Skelly 704

Project ID: *AR197355*
Work Order Number(s): *648865*

Report Date: *16-JAN-20*
Date Received: *01/13/2020*

Batch: LBA-3113420 BTEX by EPA 8021B
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 648934-005 SD.

Batch: LBA-3113423 TPH GRO by EPA 8015 Mod.
Surrogate a,a,a-Trifluorotoluene recovered below QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 648865-001.
Surrogate 4-Bromofluorobenzene recovered below QC limits Data confirmed by re-analysis. Samples affected are: 7694497-1-BLK.

TPH-GRO Relative Percent Difference (RPD) between matrix spike and duplicate was above quality control limits.
Samples in the analytical batch are: 648865-001, -002, -003

Lab Sample ID 648865-003 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). TPH-GRO recovered below QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 648865-001, -002, -003.
The Laboratory Control Sample for TPH-GRO is within laboratory Control Limits, therefore the data was accepted.

Certificate of Analytical Results 648865

Terracon-Lubbock, Lubbock, TX

Skelly 704

Sample Id:	**HA-6 (0-0.5)**	Matrix:	Soil	Date Received:	01.13.20 11.50
Lab Sample Id:	648865-001	Date Collected:	01.09.20 11.35	Sample Depth:	0 - 0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	01.15.20 10.56	Basis:	Wet Weight
Seq Number:	3113371			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**3280**	9.98	0.353	mg/kg	01.15.20 15.25		1

Analytical Method:	DRO-ORO By SW8015B			Prep Method:	SW8015P
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	01.14.20 13.00	Basis:	Wet Weight
Seq Number:	3113400				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	**375**	497	149	mg/kg	01.15.20 16.36	JF	20
Oil Range Hydrocarbons (ORO)	PHCG2835	<149	497	149	mg/kg	01.15.20 16.36	U	20

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	64	%	65-144	01.15.20 16.36	***
n-Triacontane	638-68-6	46	%	46-152	01.15.20 16.36	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	01.14.20 13.30	Basis:	Wet Weight
Seq Number:	3113253				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**10.5**	0.377	0.170	mg/kg	01.15.20 00.23		20
Toluene	108-88-3	**148**	0.377	0.0881	mg/kg	01.15.20 00.23		20
Ethylbenzene	100-41-4	**166**	3.77	1.16	mg/kg	01.16.20 03.19	D	200
m,p-Xylenes	179601-23-1	**119**	0.753	0.128	mg/kg	01.15.20 00.23		20
o-Xylene	95-47-6	**54.2**	0.377	0.128	mg/kg	01.15.20 00.23		20
Total Xylenes	1330-20-7	**173**	0.377	0.128	mg/kg	01.15.20 00.23		20
Total BTEX		**498**	0.377	0.0881	mg/kg	01.16.20 03.19		200

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	250	%	68-120	01.15.20 00.23	**
a,a,a-Trifluorotoluene	98-08-8	113	%	71-121	01.15.20 00.23	

Certificate of Analytical Results 648865

Terracon-Lubbock, Lubbock, TX

Skelly 704

Sample Id:	**HA-6 (0-0.5)**	Matrix:	Soil	Date Received:	01.13.20 11.50
Lab Sample Id:	648865-001	Date Collected:	01.09.20 11.35	Sample Depth:	0 - 0.5 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	01.14.20 13.30	Basis:	Wet Weight
Seq Number:	3113423				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	**6520**	753	51.0	mg/kg	01.16.20 03.19		200

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	90	%	76-123	01.16.20 03.19	
a,a,a-Trifluorotoluene	98-08-8	64	%	69-120	01.16.20 03.19	***

Certificate of Analytical Results 648865

Terracon-Lubbock, Lubbock, TX

Skelly 704

Sample Id:	**HA-6 (0.5-1)**	Matrix:	Soil	Date Received:	01.13.20 11.50
Lab Sample Id:	648865-002	Date Collected:	01.09.20 11.37	Sample Depth:	0.5 - 1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	01.15.20 10.56	Basis:	Wet Weight
Seq Number:	3113371			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**5370**	99.6	3.53	mg/kg	01.15.20 15.34		10

Analytical Method:	DRO-ORO By SW8015B			Prep Method:	SW8015P
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	01.14.20 13.00	Basis:	Wet Weight
Seq Number:	3113400				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	**3820**	249	74.4	mg/kg	01.15.20 17.09	F	10
Oil Range Hydrocarbons (ORO)	PHCG2835	<74.4	249	74.4	mg/kg	01.15.20 17.09	U	10

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	511	%	65-144	01.15.20 17.09	**
n-Triacontane	638-68-6	216	%	46-152	01.15.20 17.09	**

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	01.14.20 13.30	Basis:	Wet Weight
Seq Number:	3113253				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.216**	0.196	0.0888	mg/kg	01.15.20 00.47		10
Toluene	108-88-3	**13.7**	0.196	0.0460	mg/kg	01.15.20 00.47		10
Ethylbenzene	100-41-4	**22.7**	0.196	0.0605	mg/kg	01.15.20 00.47		10
m,p-Xylenes	179601-23-1	**18.0**	0.393	0.0670	mg/kg	01.15.20 00.47		10
o-Xylene	95-47-6	**7.92**	0.196	0.0670	mg/kg	01.15.20 00.47		10
Total Xylenes	1330-20-7	**25.9**	0.196	0.0670	mg/kg	01.15.20 00.47		10
Total BTEX		**62.5**	0.196	0.0460	mg/kg	01.15.20 00.47		10

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	146	%	68-120	01.15.20 00.47	**
a,a,a-Trifluorotoluene	98-08-8	95	%	71-121	01.15.20 00.47	

Certificate of Analytical Results 648865

Terracon-Lubbock, Lubbock, TX

Skelly 704

Sample Id:	**HA-6 (0.5-1)**	Matrix:	Soil	Date Received:	01.13.20 11.50
Lab Sample Id:	648865-002	Date Collected:	01.09.20 11.37	Sample Depth:	0.5 - 1 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	01.14.20 13.30	Basis:	Wet Weight
Seq Number:	3113423				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	**896**	78.6	5.32	mg/kg	01.16.20 03.43		20

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	124	%	76-123	01.16.20 03.43	**
a,a,a-Trifluorotoluene	98-08-8	79	%	69-120	01.16.20 03.43	

Certificate of Analytical Results 648865

Terracon-Lubbock, Lubbock, TX

Skelly 704

Sample Id:	**HA-6 (1.5-2)**	Matrix:	Soil	Date Received:	01.13.20 11.50
Lab Sample Id:	648865-003	Date Collected:	01.09.20 11.39	Sample Depth:	1.5 - 2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	01.15.20 10.56	Basis:	Wet Weight
Seq Number:	3113371			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**6800**	98.4	3.48	mg/kg	01.15.20 15.43		10

Analytical Method:	DRO-ORO By SW8015B			Prep Method:	SW8015P
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	01.14.20 13.00	Basis:	Wet Weight
Seq Number:	3113400				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	**739**	125	37.5	mg/kg	01.15.20 17.44	F	5
Oil Range Hydrocarbons (ORO)	PHCG2835	<37.5	125	37.5	mg/kg	01.15.20 17.44	U	5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	185	%	65-144	01.15.20 17.44	**
n-Triacontane	638-68-6	163	%	46-152	01.15.20 17.44	**

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	01.14.20 13.30	Basis:	Wet Weight
Seq Number:	3113253				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00854	0.0189	0.00854	mg/kg	01.15.20 00.00	U	1
Toluene	108-88-3	**0.832**	0.0189	0.00442	mg/kg	01.15.20 00.00		1
Ethylbenzene	100-41-4	**3.47**	0.0189	0.00582	mg/kg	01.15.20 00.00		1
m,p-Xylenes	179601-23-1	**2.91**	0.0378	0.00645	mg/kg	01.15.20 00.00		1
o-Xylene	95-47-6	**1.52**	0.0189	0.00645	mg/kg	01.15.20 00.00		1
Total Xylenes	1330-20-7	**4.43**	0.0189	0.00645	mg/kg	01.15.20 00.00		1
Total BTEX		**8.73**	0.0189	0.00442	mg/kg	01.15.20 00.00		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	188	%	68-120	01.15.20 00.00	**
a,a,a-Trifluorotoluene	98-08-8	99	%	71-121	01.15.20 00.00	

Certificate of Analytical Results 648865

Terracon-Lubbock, Lubbock, TX

Skelly 704

Sample Id:	**HA-6 (1.5-2)**	Matrix:	Soil	Date Received:	01.13.20 11.50
Lab Sample Id:	648865-003	Date Collected:	01.09.20 11.39	Sample Depth:	1.5 - 2 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	01.14.20 13.30	Basis:	Wet Weight
Seq Number:	3113423				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	**130**	37.8	2.56	mg/kg	01.16.20 00.05	XF	10

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	83	%	76-123	01.16.20 00.05	
a,a,a-Trifluorotoluene	98-08-8	69	%	69-120	01.16.20 00.05	

Certificate of Analytical Results 648865

Terracon-Lubbock, Lubbock, TX

Skelly 704

Sample Id:	**HA-7 (0-0.5)**	Matrix:	Soil	Date Received:	01.13.20 11.50
Lab Sample Id:	648865-004	Date Collected:	01.09.20 11.44	Sample Depth:	0 - 0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	01.15.20 10.56	Basis:	Wet Weight
Seq Number:	3113371			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**41.4**	10.1	0.356	mg/kg	01.15.20 15.52		1

Analytical Method:	DRO-ORO By SW8015B			Prep Method:	SW8015P
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	01.14.20 13.00	Basis:	Wet Weight
Seq Number:	3113400				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.48	25.0	7.48	mg/kg	01.15.20 18.18	UF	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.48	25.0	7.48	mg/kg	01.15.20 18.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	105	%	65-144	01.15.20 18.18	
n-Triacontane	638-68-6	125	%	46-152	01.15.20 18.18	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	01.14.20 13.30	Basis:	Wet Weight
Seq Number:	3113253				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00858	0.0190	0.00858	mg/kg	01.14.20 22.47	U	1
Toluene	108-88-3	<0.00444	0.0190	0.00444	mg/kg	01.14.20 22.47	U	1
Ethylbenzene	100-41-4	<0.00584	0.0190	0.00584	mg/kg	01.14.20 22.47	U	1
m,p-Xylenes	179601-23-1	<0.00647	0.0380	0.00647	mg/kg	01.14.20 22.47	U	1
o-Xylene	95-47-6	<0.00647	0.0190	0.00647	mg/kg	01.14.20 22.47	U	1
Total Xylenes	1330-20-7	<0.00647	0.0190	0.00647	mg/kg	01.14.20 22.47	U	1
Total BTEX		<0.00444	0.0190	0.00444	mg/kg	01.14.20 22.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	68-120	01.14.20 22.47	
a,a,a-Trifluorotoluene	98-08-8	119	%	71-121	01.14.20 22.47	

Certificate of Analytical Results 648865

Terracon-Lubbock, Lubbock, TX

Skelly 704

Sample Id:	**HA-7 (0-0.5)**	Matrix:	Soil	Date Received:	01.13.20 11.50
Lab Sample Id:	648865-004	Date Collected:	01.09.20 11.44	Sample Depth:	0 - 0.5 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	01.14.20 13.30	Basis:	Wet Weight
Seq Number:	3113251				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.257	3.80	0.257	mg/kg	01.14.20 22.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	84	%	76-123	01.14.20 22.47	
a,a,a-Trifluorotoluene	98-08-8	92	%	69-120	01.14.20 22.47	

Certificate of Analytical Results 648865

Terracon-Lubbock, Lubbock, TX

Skelly 704

Sample Id:	**HA-7 (0.5-1)**	Matrix:	Soil	Date Received:	01.13.20 11.50
Lab Sample Id:	648865-005	Date Collected:	01.09.20 11.46	Sample Depth:	0.5 - 1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	01.15.20 10.56	Basis:	Wet Weight
Seq Number:	3113371			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**13.0**	10.0	0.354	mg/kg	01.15.20 16.02		1

Analytical Method:	DRO-ORO By SW8015B			Prep Method:	SW8015P
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	01.14.20 13.00	Basis:	Wet Weight
Seq Number:	3113400				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.46	24.9	7.46	mg/kg	01.15.20 18.51	UF	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.46	24.9	7.46	mg/kg	01.15.20 18.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	113	%	65-144	01.15.20 18.51	
n-Triacontane	638-68-6	128	%	46-152	01.15.20 18.51	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	01.14.20 13.30	Basis:	Wet Weight
Seq Number:	3113253				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00792	0.0175	0.00792	mg/kg	01.14.20 23.11	U	1
Toluene	108-88-3	<0.00410	0.0175	0.00410	mg/kg	01.14.20 23.11	U	1
Ethylbenzene	100-41-4	<0.00539	0.0175	0.00539	mg/kg	01.14.20 23.11	U	1
m,p-Xylenes	179601-23-1	<0.00597	0.0350	0.00597	mg/kg	01.14.20 23.11	U	1
o-Xylene	95-47-6	<0.00597	0.0175	0.00597	mg/kg	01.14.20 23.11	U	1
Total Xylenes	1330-20-7	<0.00597	0.0175	0.00597	mg/kg	01.14.20 23.11	U	1
Total BTEX		<0.00410	0.0175	0.00410	mg/kg	01.14.20 23.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	68-120	01.14.20 23.11	
a,a,a-Trifluorotoluene	98-08-8	123	%	71-121	01.14.20 23.11	**

Certificate of Analytical Results 648865

Terracon-Lubbock, Lubbock, TX

Skelly 704

Sample Id:	**HA-7 (0.5-1)**	Matrix:	Soil	Date Received:	01.13.20 11.50
Lab Sample Id:	648865-005	Date Collected:	01.09.20 11.46	Sample Depth:	0.5 - 1 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	01.14.20 13.30	Basis:	Wet Weight
Seq Number:	3113251				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.237	3.50	0.237	mg/kg	01.14.20 23.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	88	%	76-123	01.14.20 23.11	
a,a,a-Trifluorotoluene	98-08-8	95	%	69-120	01.14.20 23.11	

Certificate of Analytical Results 648865

Terracon-Lubbock, Lubbock, TX

Skelly 704

Sample Id:	**HA-7 (1.5-2)**	Matrix:	Soil	Date Received:	01.13.20 11.50
Lab Sample Id:	648865-006	Date Collected:	01.09.20 11.48	Sample Depth:	1.5 - 2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	01.15.20 10.56	Basis:	Wet Weight
Seq Number:	3113371			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**10.7**	9.88	0.350	mg/kg	01.15.20 16.11		1

Analytical Method:	DRO-ORO By SW8015B			Prep Method:	SW8015P
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	01.14.20 13.00	Basis:	Wet Weight
Seq Number:	3113400				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.52	25.1	7.52	mg/kg	01.15.20 19.26	UF	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.52	25.1	7.52	mg/kg	01.15.20 19.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	122	%	65-144	01.15.20 19.26	
n-Triacontane	638-68-6	134	%	46-152	01.15.20 19.26	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	01.14.20 13.30	Basis:	Wet Weight
Seq Number:	3113253				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00863	0.0191	0.00863	mg/kg	01.14.20 23.35	U	1
Toluene	108-88-3	<0.00447	0.0191	0.00447	mg/kg	01.14.20 23.35	U	1
Ethylbenzene	100-41-4	<0.00588	0.0191	0.00588	mg/kg	01.14.20 23.35	U	1
m,p-Xylenes	179601-23-1	<0.00651	0.0382	0.00651	mg/kg	01.14.20 23.35	U	1
o-Xylene	95-47-6	<0.00651	0.0191	0.00651	mg/kg	01.14.20 23.35	U	1
Total Xylenes	1330-20-7	<0.00651	0.0191	0.00651	mg/kg	01.14.20 23.35	U	1
Total BTEX		<0.00447	0.0191	0.00447	mg/kg	01.14.20 23.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	85	%	68-120	01.14.20 23.35	
a,a,a-Trifluorotoluene	98-08-8	99	%	71-121	01.14.20 23.35	

Certificate of Analytical Results 648865

Terracon-Lubbock, Lubbock, TX

Skelly 704

Sample Id:	**HA-7 (1.5-2)**	Matrix:	Soil	Date Received:	01.13.20 11.50
Lab Sample Id:	648865-006	Date Collected:	01.09.20 11.48	Sample Depth:	1.5 - 2 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	01.14.20 13.30	Basis:	Wet Weight
Seq Number:	3113251				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.259	3.82	0.259	mg/kg	01.14.20 23.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	71	%	76-123	01.14.20 23.35	**
a,a,a-Trifluorotoluene	98-08-8	76	%	69-120	01.14.20 23.35	

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 648865

Terracon-Lubbock

Skelly 704

Analytical Method: Chloride by EPA 300 — Prep Method: SW9056P
Seq Number: 3113371 — Matrix: Solid — Date Prep: 01.15.20
MB Sample Id: 7694386-1-BLK — LCS Sample Id: 7694386-1-BKS — LCSD Sample Id: 7694386-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.354	100	101	101	101	101	80-120	0	20	mg/kg	01.15.20 11:34	

Analytical Method: Chloride by EPA 300 — Prep Method: SW9056P
Seq Number: 3113371 — Matrix: Soil — Date Prep: 01.15.20
Parent Sample Id: 648985-010 — MS Sample Id: 648985-010 S — MSD Sample Id: 648985-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	53.4	99.8	152	99	152	99	80-120	0	20	mg/kg	01.15.20 12:38	

Analytical Method: Chloride by EPA 300 — Prep Method: SW9056P
Seq Number: 3113371 — Matrix: Soil — Date Prep: 01.15.20
Parent Sample Id: 648985-011 — MS Sample Id: 648985-011 S — MSD Sample Id: 648985-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	47.4	99.8	144	97	144	97	80-120	0	20	mg/kg	01.15.20 13:25	

Analytical Method: DRO-ORO By SW8015B — Prep Method: SW8015P
Seq Number: 3113400 — Matrix: Solid — Date Prep: 01.14.20
MB Sample Id: 7694398-1-BLK — LCS Sample Id: 7694398-1-BKS — LCSD Sample Id: 7694398-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Diesel Range Organics (DRO)	<7.48	100	131	131	94.3	94	63-139	33	20	mg/kg	01.15.20 11:04	F

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
Tricosane	110		116		102		65-144	%	01.15.20 11:04
n-Triacontane	124		125		120		46-152	%	01.15.20 11:04

Analytical Method: DRO-ORO By SW8015B — Prep Method: SW8015P
Seq Number: 3113400 — Matrix: Solid — Date Prep: 01.14.20
MB Sample Id: 7694398-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Oil Range Hydrocarbons (ORO)	<7.48	mg/kg	01.15.20 13:17	

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

QC Summary 648865

Terracon-Lubbock

Skelly 704

Analytical Method: DRO-ORO By SW8015B | Prep Method: SW8015P
Seq Number: 3113400 | Matrix: Soil | Date Prep: 01.14.20
Parent Sample Id: 648879-001 | MS Sample Id: 648879-001 S | MSD Sample Id: 648879-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Diesel Range Organics (DRO)	<7.49	100	99.5	100	106	106	63-139	6	20	mg/kg	01.15.20 14:23	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
Tricosane	103		101		65-144	%	01.15.20 14:23
n-Triacontane	118		120		46-152	%	01.15.20 14:23

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3113253 | Matrix: Solid | Date Prep: 01.14.20
MB Sample Id: 7694380-1-BLK | LCS Sample Id: 7694380-1-BKS | LCSD Sample Id: 7694380-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00904	2.00	2.01	101	2.09	105	55-120	4	20	mg/kg	01.14.20 17:07	
Toluene	<0.00468	2.00	1.97	99	2.05	103	77-120	4	20	mg/kg	01.14.20 17:07	
Ethylbenzene	<0.00616	2.00	1.91	96	2.02	101	77-120	6	20	mg/kg	01.14.20 17:07	
m,p-Xylenes	<0.00682	4.00	3.79	95	4.00	100	78-120	5	20	mg/kg	01.14.20 17:07	
o-Xylene	<0.00682	2.00	1.93	97	2.04	102	78-120	6	20	mg/kg	01.14.20 17:07	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	107		108		109		68-120	%	01.14.20 17:07
a,a,a-Trifluorotoluene	122	**	118		119		71-121	%	01.14.20 17:07

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3113420 | Matrix: Solid | Date Prep: 01.14.20
MB Sample Id: 7694489-1-BLK | LCS Sample Id: 7694489-1-BKS | LCSD Sample Id: 7694489-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Ethylbenzene	<0.00616	2.00	1.89	95	1.85	93	77-120	2	20	mg/kg	01.15.20 21:16	
m,p-Xylenes	<0.00682	4.00	3.76	94	3.68	92	78-120	2	20	mg/kg	01.15.20 21:16	
o-Xylene	<0.00682	2.00	1.94	97	1.90	95	78-120	2	20	mg/kg	01.15.20 21:16	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	83		82		88		68-120	%	01.15.20 21:16
a,a,a-Trifluorotoluene	95		92		98		71-121	%	01.15.20 21:16

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

Final 1.000

QC Summary 648865

Terracon-Lubbock

Skelly 704

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3113253 Matrix: Soil Date Prep: 01.14.20
Parent Sample Id: 648879-001 MS Sample Id: 648879-001 S MSD Sample Id: 648879-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00888	1.96	2.07	106	2.10	106	54-120	1	25	mg/kg	01.14.20 20:22	
Toluene	<0.00460	1.96	1.99	102	2.05	103	57-120	3	25	mg/kg	01.14.20 20:22	
Ethylbenzene	<0.00605	1.96	1.97	101	2.08	105	58-131	5	25	mg/kg	01.14.20 20:22	
m,p-Xylenes	<0.00670	3.93	3.82	97	4.04	102	62-124	6	25	mg/kg	01.14.20 20:22	
o-Xylene	<0.00670	1.96	1.94	99	2.04	103	62-124	5	25	mg/kg	01.14.20 20:22	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	104		89		68-120	%	01.14.20 20:22
a,a,a-Trifluorotoluene	124	**	101		71-121	%	01.14.20 20:22

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3113420 Matrix: Soil Date Prep: 01.14.20
Parent Sample Id: 648934-005 MS Sample Id: 648934-005 S MSD Sample Id: 648934-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Ethylbenzene	16.9	20.0	15.8	0	15.8	0	58-131	0	25	mg/kg	01.16.20 02:06	X
m,p-Xylenes	55.7	40.0	47.9	0	48.4	0	62-124	1	25	mg/kg	01.16.20 02:06	X
o-Xylene	19.1	20.0	17.2	0	17.6	0	62-124	2	25	mg/kg	01.16.20 02:06	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	88		185	**	68-120	%	01.16.20 02:06
a,a,a-Trifluorotoluene	90		103		71-121	%	01.16.20 02:06

Analytical Method: **TPH GRO by EPA 8015 Mod.** Prep Method: SW5030B
Seq Number: 3113251 Matrix: Solid Date Prep: 01.14.20
MB Sample Id: 7694381-1-BLK LCS Sample Id: 7694381-1-BKS LCSD Sample Id: 7694381-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-GRO	<0.271	20.0	19.4	97	19.0	95	35-129	2	20	mg/kg	01.14.20 17:56	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	89		122		106		76-123	%	01.14.20 17:56
a,a,a-Trifluorotoluene	95		95		78		69-120	%	01.14.20 17:56

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

QC Summary 648865

Terracon-Lubbock

Skelly 704

Analytical Method: TPH GRO by EPA 8015 Mod. Prep Method: SW5030B
Seq Number: 3113423 Matrix: Solid Date Prep: 01.14.20
MB Sample Id: 7694497-1-BLK LCS Sample Id: 7694497-1-BKS LCSD Sample Id: 7694497-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-GRO	<0.271	20.0	17.4	87	19.0	95	35-129	9	20	mg/kg	01.15.20 22:04	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	70	**	97		105		76-123	%	01.15.20 22:04
a,a,a-Trifluorotoluene	73		73		79		69-120	%	01.15.20 22:04

Analytical Method: TPH GRO by EPA 8015 Mod. Prep Method: SW5030B
Seq Number: 3113251 Matrix: Soil Date Prep: 01.14.20
Parent Sample Id: 648879-001 MS Sample Id: 648879-001 S MSD Sample Id: 648879-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-GRO	0.299	18.9	15.9	83	16.4	84	35-129	3	20	mg/kg	01.14.20 21:10	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	100		115		76-123	%	01.14.20 21:10
a,a,a-Trifluorotoluene	79		96		69-120	%	01.14.20 21:10

Analytical Method: TPH GRO by EPA 8015 Mod. Prep Method: SW5030B
Seq Number: 3113423 Matrix: Soil Date Prep: 01.14.20
Parent Sample Id: 648865-003 MS Sample Id: 648865-003 S MSD Sample Id: 648865-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-GRO	130	200	116	0	244	57	35-129	71	20	mg/kg	01.16.20 00:30	XF

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	88		111		76-123	%	01.16.20 00:30
a,a,a-Trifluorotoluene	77		80		69-120	%	01.16.20 00:30

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

648865

648865

CHAIN OF CUSTODY RECORD

Terracon

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

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

Project Number: AR197355
Project Name: Skelly 704

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE:
TEMP OF COOLER WHEN RECEIVED (°C): 1.1/1.2 +0.1
Page 1 of 1

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 2 oz Glass	4 oz Glass	5035 kit	40 ml VOA	BTEX (EPA Method 8021B)	TPH Extended 8015	Chloride (EPA Method 300)	Hold	Lab Sample ID
S	1/9/2019	11:35		X	HA-6 (0-0.5)	0'	0.5'		X			X	X	X		
S	1/9/2019	11:37		X	HA-6 (0.5-1)	0.5'	1'		X			X	X	X		
S	1/9/2019	11:39		X	HA-6 (1.5-2)	1.5'	2'		X			X	X	X		
S	1/9/2019	11:44		X	HA-7 (0-0.5)	0'	0.5'		X			X	X	X		
S	1/9/2019	11:46		X	HA-7 (0.5-1)	0.5'	1'		X			X	X	X		
S	1/9/2019	11:48		X	HA-7 (1.5-2)	1.5'	2'		X			X	X	X		
	1/9/2020															

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

TRRP Laboratory Review Checklist ☐ Yes ☐ No

	Date	Time	Received by (Signature)	Date	Time
Relinquished by (Signature)	1/3/2020	11:50	Brenda Waist		
Relinquished by (Signature)					
Relinquished by (Signature)					
Relinquished by (Signature)					

NOTES: Client:

e-mail results to:

greg.pawlak@terracon.com
erin.loyd@terracon.com
jrguesnier@terracon.com

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

Inter-Office Shipment

IOS Number : 55978

Date/Time: 01.14.2020
Lab# From: **Lubbock**
Lab# To: **Houston**

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

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

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
648865-001	S	HA-6 (0-0.5)	01.09.2020 11:35	E300_CL	Chloride by EPA 300	01.17.2020	02.06.2020	JKR	CL	
648865-002	S	HA-6 (0.5-1)	01.09.2020 11:37	E300_CL	Chloride by EPA 300	01.17.2020	02.06.2020	JKR	CL	
648865-003	S	HA-6 (1.5-2)	01.09.2020 11:39	E300_CL	Chloride by EPA 300	01.17.2020	02.06.2020	JKR	CL	
648865-004	S	HA-7 (0-0.5)	01.09.2020 11:44	E300_CL	Chloride by EPA 300	01.17.2020	02.06.2020	JKR	CL	
648865-005	S	HA-7 (0.5-1)	01.09.2020 11:46	E300_CL	Chloride by EPA 300	01.17.2020	02.06.2020	JKR	CL	
648865-006	S	HA-7 (1.5-2)	01.09.2020 11:48	E300_CL	Chloride by EPA 300	01.17.2020	02.06.2020	JKR	CL	

Inter Office Shipment or Sample Comments:

Relinquished By: Brenda Ward
Brenda Ward

Date Relinquished: 01.14.2020

Received By: Ashly Kowalski

Date Received:

Cooler Temperature:

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 55978

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

Sent By: Brenda Ward **Date Sent:** 01.14.2020 11.15 AM

Received By: **Date Received:**

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

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

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

Checklist reviewed by: _____ Date: _____
Ashly Kowalski

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Terracon-Lubbock

Date/ Time Received: 01.13.2020 11.50.00 AM

Work Order #: 648865

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

Temperature Measuring device used : IR-4

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	1.2	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**	
#5 Custody Seals intact on sample bottles?	**N/A**	
#6*Custody Seals Signed and dated?	**N/A**	
#7 *Chain of Custody present?	**Yes**	
#8 Any missing/extra samples?	**No**	
#9 Chain of Custody signed when relinquished/ received?	**Yes**	
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**	
#11 Container label(s) legible and intact?	**Yes**	
#12 Samples in proper container/ bottle?	**Yes**	
#13 Samples properly preserved?	**Yes**	
#14 Sample container(s) intact?	**Yes**	
#15 Sufficient sample amount for indicated test(s)?	**Yes**	
#16 All samples received within hold time?	**Yes**	
#17 Subcontract of sample(s)?	**Yes**	Chlorides sent to Staffoprd
#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: 01.13.2020
Brenda Ward

Checklist reviewed by: Jessica Kramer Date: 01.14.2020
Jessica Kramer

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Certificate of Analysis Summary 668308

Terracon-Lubbock, Lubbock, TX

Project Name: Skelly 704

Project Id: AR197355
Contact: Joseph Guesnier
Project Location:

Date Received in Lab: Mon 07.27.2020 16:36
Report Date: 07.31.2020 15:51
Project Manager: Jessica Kramer

Analysis Requested		668308-001		668308-002		668308-003		668308-004		668308-005		668308-006	
	Field Id:	CS-1 (0-0.5)		CS-1 (0.5-1)		CS-1 (1.5-2)		CS-2 (0-0.5)		CS-2 (0.5-1)		CS-3 (0-0.5)	
	Depth:	0-0.5		0.5-1		1.5-2		0-0.5		0.5-1		0-0.5	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	07.22.2020 12:00		07.22.2020 12:05		07.22.2020 12:10		07.22.2020 12:20		07.22.2020 12:25		07.22.2020 12:30	
BTEX by EPA 8021B SUB: T104704400-20-20	***Extracted:***	07.30.2020 17:00		07.30.2020 17:00		07.30.2020 17:00		07.30.2020 17:00		07.30.2020 17:00		07.30.2020 17:00	
	Analyzed:	07.31.2020 00:00		07.31.2020 00:20		07.31.2020 00:40		07.31.2020 01:01		07.31.2020 01:21		07.31.2020 01:42	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00202	0.00202	<0.00200	0.00200	<0.00202	0.00202	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200
Toluene		<0.00202	0.00202	<0.00200	0.00200	<0.00202	0.00202	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200
Ethylbenzene		<0.00202	0.00202	<0.00200	0.00200	<0.00202	0.00202	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200
m,p-Xylenes		<0.00404	0.00404	<0.00401	0.00401	<0.00403	0.00403	<0.00403	0.00403	<0.00401	0.00401	<0.00399	0.00399
o-Xylene		<0.00202	0.00202	<0.00200	0.00200	<0.00202	0.00202	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200
Xylenes, Total		<0.00202	0.00202	<0.00200	0.00200	<0.00202	0.00202	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200
Total BTEX		<0.00202	0.00202	<0.00200	0.00200	<0.00202	0.00202	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200
Chloride by EPA 300 SUB: T104704400-20-20	***Extracted:***	07.29.2020 14:30		07.29.2020 14:30		07.29.2020 14:30		07.29.2020 16:30		07.29.2020 16:30		07.29.2020 16:30	
	Analyzed:	07.29.2020 22:14		07.29.2020 22:19		07.29.2020 22:24		07.29.2020 22:56		07.29.2020 23:54		07.29.2020 23:59	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		44.3	5.00	23.7	5.00	109	5.04	210	4.97	467	4.97	47.7	5.04
TPH by SW8015 Mod SUB: T104704400-20-20	***Extracted:***	07.29.2020 12:00		07.29.2020 12:00		07.29.2020 12:00		07.29.2020 12:00		07.29.2020 12:00		07.29.2020 12:00	
	Analyzed:	07.29.2020 12:36		07.29.2020 13:40		07.29.2020 14:02		07.29.2020 14:23		07.29.2020 14:45		07.29.2020 15:06	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0	<49.8	49.8	<50.0	50.0	<49.8	49.8	<49.9	49.9	<49.9	49.9
Diesel Range Organics (DRO)		<50.0	50.0	<49.8	49.8	<50.0	50.0	<49.8	49.8	<49.9	49.9	<49.9	49.9
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<49.8	49.8	<50.0	50.0	<49.8	49.8	<49.9	49.9	<49.9	49.9
Total TPH		<50.0	50.0	<49.8	49.8	<50.0	50.0	<49.8	49.8	<49.9	49.9	<49.9	49.9

BRL - Below Reporting Limit

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

Jessica Kramer

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Certificate of Analysis Summary 668308

Terracon-Lubbock, Lubbock, TX

Project Name: Skelly 704

Project Id: AR197355
Contact: Joseph Guesnier
Project Location:

Date Received in Lab: Mon 07.27.2020 16:36
Report Date: 07.31.2020 15:51
Project Manager: Jessica Kramer

Analysis Requested		668308-007		668308-008		668308-009				
	Field Id:	CS-3 (0.5-1)		CS-4 (0-0.5)		CS-4 (0.5-1)				
	Depth:	0.5-1		0-0.5		0.5-1				
	Matrix:	SOIL		SOIL		SOIL				
	Sampled:	07.22.2020 12:35		07.22.2020 12:40		07.22.2020 12:45				
BTEX by EPA 8021B SUB: T104704400-20-20	*Extracted:*	07.30.2020 17:00		07.30.2020 17:00		07.30.2020 17:00				
	Analyzed:	07.31.2020 02:02		07.31.2020 02:23		07.31.2020 02:43				
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL			
Benzene		<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202			
Toluene		<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202			
Ethylbenzene		<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202			
m,p-Xylenes		<0.00400	0.00400	<0.00402	0.00402	<0.00403	0.00403			
o-Xylene		<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202			
Xylenes, Total		<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202			
Total BTEX		<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202			
Chloride by EPA 300 SUB: T104704400-20-20	*Extracted:*	07.29.2020 16:30		07.29.2020 16:30		07.29.2020 16:30				
	Analyzed:	07.30.2020 00:04		07.30.2020 00:10		07.30.2020 00:25				
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL			
Chloride		26.9	5.01	108	5.00	100	4.97			
TPH by SW8015 Mod SUB: T104704400-20-20	*Extracted:*	07.29.2020 12:00		07.29.2020 12:00		07.29.2020 12:00				
	Analyzed:	07.29.2020 15:28		07.29.2020 15:49		07.29.2020 16:11				
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL			
Gasoline Range Hydrocarbons (GRO)		<49.8	49.8	<50.0	50.0	<50.0	50.0			
Diesel Range Organics (DRO)		<49.8	49.8	<50.0	50.0	<50.0	50.0			
Motor Oil Range Hydrocarbons (MRO)		<49.8	49.8	<50.0	50.0	<50.0	50.0			
Total TPH		<49.8	49.8	<50.0	50.0	<50.0	50.0			

BRL - Below Reporting Limit

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

Jessica Kramer

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Analytical Report 668308

for

Terracon-Lubbock

Project Manager: Joseph Guesnier

Skelly 704

AR197355

07.31.2020

Collected By: Client

6701 Aberdeen, Suite 9 Lubbock, TX 79424

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-36), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-25), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-17)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-7)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

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07.31.2020

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

Reference: Eurofins Xenco, LLC Report No(s): **668308**
Skelly 704
Project Address:

Joseph Guesnier:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 668308. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 668308 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Manager

A Small Business and Minority Company

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

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Sample Cross Reference 668308

Terracon-Lubbock, Lubbock, TX

Skelly 704

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
CS-1 (0-0.5)	S	07.22.2020 12:00	0 - 0.5	668308-001
CS-1 (0.5-1)	S	07.22.2020 12:05	0.5 - 1	668308-002
CS-1 (1.5-2)	S	07.22.2020 12:10	1.5 - 2	668308-003
CS-2 (0-0.5)	S	07.22.2020 12:20	0 - 0.5	668308-004
CS-2 (0.5-1)	S	07.22.2020 12:25	0.5 - 1	668308-005
CS-3 (0-0.5)	S	07.22.2020 12:30	0 - 0.5	668308-006
CS-3 (0.5-1)	S	07.22.2020 12:35	0.5 - 1	668308-007
CS-4 (0-0.5)	S	07.22.2020 12:40	0 - 0.5	668308-008
CS-4 (0.5-1)	S	07.22.2020 12:45	0.5 - 1	668308-009

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CASE NARRATIVE

Client Name: Terracon-Lubbock

Project Name: Skelly 704

Project ID: *AR197355*
Work Order Number(s): *668308*

Report Date: *07.31.2020*
Date Received: *07.27.2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

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Certificate of Analytical Results 668308

Terracon-Lubbock, Lubbock, TX

Skelly 704

Sample Id:	**CS-1 (0-0.5)**	Matrix:	Soil	Date Received:	07.27.2020 16:36
Lab Sample Id:	668308-001	Date Collected:	07.22.2020 12:00	Sample Depth:	0 - 0.5

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	07.29.2020 14:30	Basis:	Wet Weight
Seq Number:	3133006			SUB:	T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**44.3**	5.00	mg/kg	07.29.2020 22:14		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	07.29.2020 12:00	Basis:	Wet Weight
Seq Number:	3133041			SUB:	T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	07.29.2020 12:36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.29.2020 12:36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.29.2020 12:36	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.29.2020 12:36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-130	07.29.2020 12:36	
o-Terphenyl	84-15-1	92	%	70-130	07.29.2020 12:36	

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Certificate of Analytical Results 668308

Terracon-Lubbock, Lubbock, TX

Skelly 704

Sample Id:	**CS-1 (0-0.5)**	Matrix:	Soil	Date Received:	07.27.2020 16:36
Lab Sample Id:	668308-001	Date Collected:	07.22.2020 12:00	Sample Depth:	0 - 0.5
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	07.30.2020 17:00	Basis:	Wet Weight
Seq Number:	3133149			SUB:	T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.31.2020 00:00	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.31.2020 00:00	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.31.2020 00:00	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	07.31.2020 00:00	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.31.2020 00:00	U	1
Xylenes, Total	1330-20-7	<0.00202	0.00202	mg/kg	07.31.2020 00:00	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.31.2020 00:00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	110	%	70-130	07.31.2020 00:00	
1,4-Difluorobenzene	540-36-3	96	%	70-130	07.31.2020 00:00	

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Certificate of Analytical Results 668308

Terracon-Lubbock, Lubbock, TX

Skelly 704

Sample Id:	**CS-1 (0.5-1)**	Matrix:	Soil	Date Received:	07.27.2020 16:36
Lab Sample Id:	668308-002	Date Collected:	07.22.2020 12:05	Sample Depth:	0.5 - 1

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	07.29.2020 14:30	Basis:	Wet Weight
Seq Number:	3133006			SUB:	T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**23.7**	5.00	mg/kg	07.29.2020 22:19		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	07.29.2020 12:00	Basis:	Wet Weight
Seq Number:	3133041			SUB:	T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	07.29.2020 13:40	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	07.29.2020 13:40	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	07.29.2020 13:40	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	07.29.2020 13:40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-130	07.29.2020 13:40	
o-Terphenyl	84-15-1	96	%	70-130	07.29.2020 13:40	

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Certificate of Analytical Results 668308

Terracon-Lubbock, Lubbock, TX

Skelly 704

Sample Id:	**CS-1 (0.5-1)**	Matrix:	Soil	Date Received:	07.27.2020 16:36
Lab Sample Id:	668308-002	Date Collected:	07.22.2020 12:05	Sample Depth:	0.5 - 1
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	07.30.2020 17:00	Basis:	Wet Weight
Seq Number:	3133149			SUB:	T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.31.2020 00:20	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.31.2020 00:20	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.31.2020 00:20	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	07.31.2020 00:20	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.31.2020 00:20	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	07.31.2020 00:20	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.31.2020 00:20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	98	%	70-130	07.31.2020 00:20	
4-Bromofluorobenzene	460-00-4	97	%	70-130	07.31.2020 00:20	

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Skelly 704

Sample Id:	**CS-1 (1.5-2)**	Matrix:	Soil	Date Received:	07.27.2020 16:36
Lab Sample Id:	668308-003	Date Collected:	07.22.2020 12:10	Sample Depth:	1.5 - 2

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	07.29.2020 14:30	Basis:	Wet Weight
Seq Number:	3133006			SUB:	T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**109**	5.04	mg/kg	07.29.2020 22:24		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	07.29.2020 12:00	Basis:	Wet Weight
Seq Number:	3133041			SUB:	T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	07.29.2020 14:02	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.29.2020 14:02	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.29.2020 14:02	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.29.2020 14:02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-130	07.29.2020 14:02	
o-Terphenyl	84-15-1	96	%	70-130	07.29.2020 14:02	

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Terracon-Lubbock, Lubbock, TX

Skelly 704

Sample Id:	**CS-1 (1.5-2)**	Matrix:	Soil	Date Received:	07.27.2020 16:36
Lab Sample Id:	668308-003	Date Collected:	07.22.2020 12:10	Sample Depth:	1.5 - 2
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	07.30.2020 17:00	Basis:	Wet Weight
Seq Number:	3133149			SUB:	T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.31.2020 00:40	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.31.2020 00:40	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.31.2020 00:40	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	07.31.2020 00:40	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.31.2020 00:40	U	1
Xylenes, Total	1330-20-7	<0.00202	0.00202	mg/kg	07.31.2020 00:40	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.31.2020 00:40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	07.31.2020 00:40	
4-Bromofluorobenzene	460-00-4	123	%	70-130	07.31.2020 00:40	

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Skelly 704

Sample Id:	**CS-2 (0-0.5)**	Matrix:	Soil	Date Received:	07.27.2020 16:36
Lab Sample Id:	668308-004	Date Collected:	07.22.2020 12:20	Sample Depth:	0 - 0.5

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	07.29.2020 16:30	Basis:	Wet Weight
Seq Number:	3133022			SUB:	T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**210**	4.97	mg/kg	07.29.2020 22:56		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	07.29.2020 12:00	Basis:	Wet Weight
Seq Number:	3133041			SUB:	T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	07.29.2020 14:23	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	07.29.2020 14:23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	07.29.2020 14:23	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	07.29.2020 14:23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-130	07.29.2020 14:23	
o-Terphenyl	84-15-1	101	%	70-130	07.29.2020 14:23	

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Skelly 704

Sample Id:	**CS-2 (0-0.5)**	Matrix:	Soil	Date Received:	07.27.2020 16:36
Lab Sample Id:	668308-004	Date Collected:	07.22.2020 12:20	Sample Depth:	0 - 0.5
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	07.30.2020 17:00	Basis:	Wet Weight
Seq Number:	3133149			SUB:	T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.31.2020 01:01	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.31.2020 01:01	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.31.2020 01:01	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	07.31.2020 01:01	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.31.2020 01:01	U	1
Xylenes, Total	1330-20-7	<0.00202	0.00202	mg/kg	07.31.2020 01:01	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.31.2020 01:01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	127	%	70-130	07.31.2020 01:01	
1,4-Difluorobenzene	540-36-3	104	%	70-130	07.31.2020 01:01	

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Skelly 704

Sample Id:	**CS-2 (0.5-1)**	Matrix:	Soil	Date Received:	07.27.2020 16:36
Lab Sample Id:	668308-005	Date Collected:	07.22.2020 12:25	Sample Depth:	0.5 - 1

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	07.29.2020 16:30	Basis:	Wet Weight
Seq Number:	3133022			SUB:	T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**467**	4.97	mg/kg	07.29.2020 23:54		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	07.29.2020 12:00	Basis:	Wet Weight
Seq Number:	3133041			SUB:	T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	07.29.2020 14:45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	07.29.2020 14:45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	07.29.2020 14:45	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	07.29.2020 14:45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-130	07.29.2020 14:45	
o-Terphenyl	84-15-1	105	%	70-130	07.29.2020 14:45	

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Skelly 704

Sample Id:	**CS-2 (0.5-1)**	Matrix:	Soil	Date Received:	07.27.2020 16:36
Lab Sample Id:	668308-005	Date Collected:	07.22.2020 12:25	Sample Depth:	0.5 - 1
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	07.30.2020 17:00	Basis:	Wet Weight
Seq Number:	3133149			SUB:	T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.31.2020 01:21	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.31.2020 01:21	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.31.2020 01:21	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	07.31.2020 01:21	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.31.2020 01:21	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	07.31.2020 01:21	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.31.2020 01:21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	122	%	70-130	07.31.2020 01:21	
1,4-Difluorobenzene	540-36-3	100	%	70-130	07.31.2020 01:21	

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Skelly 704

Sample Id:	**CS-3 (0-0.5)**	Matrix:	Soil	Date Received:	07.27.2020 16:36
Lab Sample Id:	668308-006	Date Collected:	07.22.2020 12:30	Sample Depth:	0 - 0.5

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	07.29.2020 16:30	Basis:	Wet Weight
Seq Number:	3133022			SUB:	T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**47.7**	5.04	mg/kg	07.29.2020 23:59		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	07.29.2020 12:00	Basis:	Wet Weight
Seq Number:	3133041			SUB:	T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	07.29.2020 15:06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	07.29.2020 15:06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	07.29.2020 15:06	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	07.29.2020 15:06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-130	07.29.2020 15:06	
o-Terphenyl	84-15-1	96	%	70-130	07.29.2020 15:06	

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Skelly 704

Sample Id:	**CS-3 (0-0.5)**	Matrix:	Soil	Date Received:	07.27.2020 16:36
Lab Sample Id:	668308-006	Date Collected:	07.22.2020 12:30	Sample Depth:	0 - 0.5
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	07.30.2020 17:00	Basis:	Wet Weight
Seq Number:	3133149			SUB:	T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.31.2020 01:42	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.31.2020 01:42	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.31.2020 01:42	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	07.31.2020 01:42	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.31.2020 01:42	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	07.31.2020 01:42	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.31.2020 01:42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	127	%	70-130	07.31.2020 01:42	
1,4-Difluorobenzene	540-36-3	99	%	70-130	07.31.2020 01:42	

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Skelly 704

Sample Id:	**CS-3 (0.5-1)**	Matrix:	Soil	Date Received:	07.27.2020 16:36
Lab Sample Id:	668308-007	Date Collected:	07.22.2020 12:35	Sample Depth:	0.5 - 1

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	07.29.2020 16:30	Basis:	Wet Weight
Seq Number:	3133022			SUB:	T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**26.9**	5.01	mg/kg	07.30.2020 00:04		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	07.29.2020 12:00	Basis:	Wet Weight
Seq Number:	3133041			SUB:	T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	07.29.2020 15:28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	07.29.2020 15:28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	07.29.2020 15:28	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	07.29.2020 15:28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-130	07.29.2020 15:28	
o-Terphenyl	84-15-1	104	%	70-130	07.29.2020 15:28	

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Skelly 704

Sample Id:	**CS-3 (0.5-1)**	Matrix:	Soil	Date Received:	07.27.2020 16:36
Lab Sample Id:	668308-007	Date Collected:	07.22.2020 12:35	Sample Depth:	0.5 - 1
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	07.30.2020 17:00	Basis:	Wet Weight
Seq Number:	3133149			SUB:	T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.31.2020 02:02	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.31.2020 02:02	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.31.2020 02:02	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	07.31.2020 02:02	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.31.2020 02:02	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	07.31.2020 02:02	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.31.2020 02:02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	124	%	70-130	07.31.2020 02:02	
1,4-Difluorobenzene	540-36-3	107	%	70-130	07.31.2020 02:02	

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Skelly 704

Sample Id:	**CS-4 (0-0.5)**	Matrix:	Soil	Date Received:	07.27.2020 16:36
Lab Sample Id:	668308-008	Date Collected:	07.22.2020 12:40	Sample Depth:	0 - 0.5

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	07.29.2020 16:30	Basis:	Wet Weight
Seq Number:	3133022			SUB:	T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**108**	5.00	mg/kg	07.30.2020 00:10		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	07.29.2020 12:00	Basis:	Wet Weight
Seq Number:	3133041			SUB:	T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	07.29.2020 15:49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.29.2020 15:49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.29.2020 15:49	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.29.2020 15:49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-130	07.29.2020 15:49	
o-Terphenyl	84-15-1	95	%	70-130	07.29.2020 15:49	

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Skelly 704

Sample Id:	**CS-4 (0-0.5)**	Matrix:	Soil	Date Received:	07.27.2020 16:36
Lab Sample Id:	668308-008	Date Collected:	07.22.2020 12:40	Sample Depth:	0 - 0.5
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	07.30.2020 17:00	Basis:	Wet Weight
Seq Number:	3133149			SUB:	T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.31.2020 02:23	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.31.2020 02:23	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.31.2020 02:23	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.31.2020 02:23	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.31.2020 02:23	U	1
Xylenes, Total	1330-20-7	<0.00201	0.00201	mg/kg	07.31.2020 02:23	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.31.2020 02:23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	07.31.2020 02:23	
4-Bromofluorobenzene	460-00-4	129	%	70-130	07.31.2020 02:23	

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Skelly 704

Sample Id:	**CS-4 (0.5-1)**	Matrix:	Soil	Date Received:	07.27.2020 16:36
Lab Sample Id:	668308-009	Date Collected:	07.22.2020 12:45	Sample Depth:	0.5 - 1

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	07.29.2020 16:30	Basis:	Wet Weight
Seq Number:	3133022			SUB:	T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**100**	4.97	mg/kg	07.30.2020 00:25		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	07.29.2020 12:00	Basis:	Wet Weight
Seq Number:	3133041			SUB:	T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	07.29.2020 16:11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.29.2020 16:11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.29.2020 16:11	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.29.2020 16:11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-130	07.29.2020 16:11	
o-Terphenyl	84-15-1	100	%	70-130	07.29.2020 16:11	

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Terracon-Lubbock, Lubbock, TX

Skelly 704

Sample Id:	**CS-4 (0.5-1)**	Matrix:	Soil	Date Received:	07.27.2020 16:36
Lab Sample Id:	668308-009	Date Collected:	07.22.2020 12:45	Sample Depth:	0.5 - 1
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	07.30.2020 17:00	Basis:	Wet Weight
Seq Number:	3133149			SUB:	T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.31.2020 02:43	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.31.2020 02:43	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.31.2020 02:43	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	07.31.2020 02:43	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.31.2020 02:43	U	1
Xylenes, Total	1330-20-7	<0.00202	0.00202	mg/kg	07.31.2020 02:43	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.31.2020 02:43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	76	%	70-130	07.31.2020 02:43	
1,4-Difluorobenzene	540-36-3	88	%	70-130	07.31.2020 02:43	

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Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 668308

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Terracon-Lubbock

Skelly 704

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3133006 — Matrix: Solid — Date Prep: 07.29.2020
MB Sample Id: 7708305-1-BLK — LCS Sample Id: 7708305-1-BKS — LCSD Sample Id: 7708305-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	253	101	253	101	90-110	0	20	mg/kg	07.29.2020 19:51	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3133022 — Matrix: Solid — Date Prep: 07.29.2020
MB Sample Id: 7708324-1-BLK — LCS Sample Id: 7708324-1-BKS — LCSD Sample Id: 7708324-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	251	100	252	101	90-110	0	20	mg/kg	07.29.2020 22:45	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3133006 — Matrix: Soil — Date Prep: 07.29.2020
Parent Sample Id: 668468-003 — MS Sample Id: 668468-003 S — MSD Sample Id: 668468-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	320	258	568	96	571	97	90-110	1	20	mg/kg	07.29.2020 20:07	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3133006 — Matrix: Soil — Date Prep: 07.29.2020
Parent Sample Id: 668470-001 — MS Sample Id: 668470-001 S — MSD Sample Id: 668470-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	23.2	254	296	107	290	105	90-110	2	20	mg/kg	07.29.2020 21:21	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3133022 — Matrix: Soil — Date Prep: 07.29.2020
Parent Sample Id: 668308-004 — MS Sample Id: 668308-004 S — MSD Sample Id: 668308-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	210	249	459	100	458	100	90-110	0	20	mg/kg	07.29.2020 23:01	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3133022 — Matrix: Soil — Date Prep: 07.29.2020
Parent Sample Id: 668308-008 — MS Sample Id: 668308-008 S — MSD Sample Id: 668308-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	108	250	366	103	367	104	90-110	0	20	mg/kg	07.30.2020 00:15	

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

Final 1.000

QC Summary 668308

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Terracon-Lubbock

Skelly 704

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3133041 — Matrix: Solid — Date Prep: 07.29.2020
MB Sample Id: 7708350-1-BLK — LCS Sample Id: 7708350-1-BKS — LCSD Sample Id: 7708350-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	876	88	875	88	70-130	0	20	mg/kg	07.29.2020 11:54	
Diesel Range Organics (DRO)	<50.0	1000	919	92	849	85	70-130	8	20	mg/kg	07.29.2020 11:54	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	96		106		108		70-130	%	07.29.2020 11:54
o-Terphenyl	94		103		104		70-130	%	07.29.2020 11:54

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3133041 — Matrix: Solid — Date Prep: 07.29.2020
MB Sample Id: 7708350-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	07.29.2020 11:33	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3133041 — Matrix: Soil — Date Prep: 07.29.2020
Parent Sample Id: 668308-001 — MS Sample Id: 668308-001 S — MSD Sample Id: 668308-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.9	998	912	91	843	85	70-130	8	20	mg/kg	07.29.2020 12:57	
Diesel Range Organics (DRO)	<49.9	998	899	90	825	83	70-130	9	20	mg/kg	07.29.2020 12:57	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	99		97		70-130	%	07.29.2020 12:57
o-Terphenyl	92		89		70-130	%	07.29.2020 12:57

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5035A
Seq Number: 3133149 — Matrix: Solid — Date Prep: 07.30.2020
MB Sample Id: 7708461-1-BLK — LCS Sample Id: 7708461-1-BKS — LCSD Sample Id: 7708461-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.114	114	0.123	123	70-130	8	35	mg/kg	07.30.2020 21:36	
Toluene	<0.00200	0.100	0.105	105	0.112	112	70-130	6	35	mg/kg	07.30.2020 21:36	
Ethylbenzene	<0.00200	0.100	0.0986	99	0.107	107	70-130	8	35	mg/kg	07.30.2020 21:36	
m,p-Xylenes	<0.00400	0.200	0.191	96	0.209	105	70-130	9	35	mg/kg	07.30.2020 21:36	
o-Xylene	<0.00200	0.100	0.0960	96	0.104	104	70-130	8	35	mg/kg	07.30.2020 21:36	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		94		97		70-130	%	07.30.2020 21:36
4-Bromofluorobenzene	102		98		102		70-130	%	07.30.2020 21:36

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

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

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

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QC Summary 668308

Terracon-Lubbock

Skelly 704

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

Seq Number: 3133149 Matrix: Soil Date Prep: 07.30.2020

Parent Sample Id: 668308-001 MS Sample Id: 668308-001 S MSD Sample Id: 668308-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.0968	97	0.0852	86	70-130	13	35	mg/kg	07.30.2020 22:18	
Toluene	<0.00201	0.100	0.0893	89	0.0801	80	70-130	11	35	mg/kg	07.30.2020 22:18	
Ethylbenzene	<0.00201	0.100	0.0898	90	0.0798	80	70-130	12	35	mg/kg	07.30.2020 22:18	
m,p-Xylenes	<0.00402	0.201	0.171	85	0.154	77	70-130	10	35	mg/kg	07.30.2020 22:18	
o-Xylene	<0.00201	0.100	0.0814	81	0.0733	74	70-130	10	35	mg/kg	07.30.2020 22:18	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	92		92		70-130	%	07.30.2020 22:18
4-Bromofluorobenzene	103		103		70-130	%	07.30.2020 22:18

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

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

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

CHAIN OF CUSTODY RECORD

668308

Terracon

Laboratory: Xenco
Address: 6701 Aberdeen
Lubbock, Texas 79424

Phone:
Contact: J. Guesnier 806-544-9276
SRS #:

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

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE:

TEMP OF COOLER WHEN RECEIVED (°C): -1.0/-1.3

Page 1 of 1

Project Number: AR197355
Project Name: Skelly 704

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 4 oz Glass	40 ml VOA	60 ml VOA	5035 kit	Chloride (EPA Method 300)	TPH Extended 8015	BTEX (EPA Method 8021B)	Hold				Lab Sample ID
S	7/22/2020	12:00		X	CS-1 (0-0.5)	0	0.5	X				X	X	X					668308-001
S	7/22/2020	12:05		X	CS-1 (0.5-1)	0.5	1	X				X	X	X					-002
S	7/22/2020	12:10		X	CS-1 (1.5-2)	1.5	2	X				X	X	X					-003
S	7/22/2020	12:20		X	CS-2 (0-0.5)	0	0.5	X				X	X	X					-004
S	7/22/2020	12:25		X	CS-2 (0.5-1)	0.5	1	X				X	X	X					-005
S	7/22/2020	12:30		X	CS-3 (0-0.5)	0	0.5	X				X	X	X					-006
S	7/22/2020	12:35		X	CS-3 (0.5-1)	0.5	1	X				X	X	X					-007
S	7/22/2020	12:40		X	CS-4 (0-0.5)	0	0.5	X				X	X	X					-008
S	7/22/2020	12:45		X	CS-4 (0.5-1)	0.5	1	X				X	X	X					-009

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

TRRP Laboratory Review Checklist: ☐ Yes ☐ No

Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
	7-27-20	4:36		7/27/20	16:36
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:

NOTES: Client: Spur Energy Partners

e-mail results to:

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

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

Inter-Office Shipment

IOS Number : 67782

Date/Time:	07.28.2020	Created by:	Michael J Turner	Please send report to:	Jessica Kramer
Lab# From:	**Lubbock**	Delivery Priority:		Address:	6701 Aberdeen, Suite 9 Lubbock, TX 79424
Lab# To:	**Midland**	Air Bill No.:	771116192074	E-Mail:	jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
668308-001	S	CS-1 (0-0.5)	07.22.2020 12:00	SW8021B	BTEX by EPA 8021B	07.31.2020	08.05.2020	JKR	BR4FBZ BZ BZME EBZ	
668308-001	S	CS-1 (0-0.5)	07.22.2020 12:00	SW8015MOD_NM	TPH by SW8015 Mod	07.31.2020	08.05.2020	JKR	PHCC10C28 PHCC28C3	
668308-001	S	CS-1 (0-0.5)	07.22.2020 12:00	E300_CL	Chloride by EPA 300	07.31.2020	08.19.2020	JKR	CL	
668308-002	S	CS-1 (0.5-1)	07.22.2020 12:05	SW8015MOD_NM	TPH by SW8015 Mod	07.31.2020	08.05.2020	JKR	PHCC10C28 PHCC28C3	
668308-002	S	CS-1 (0.5-1)	07.22.2020 12:05	E300_CL	Chloride by EPA 300	07.31.2020	08.19.2020	JKR	CL	
668308-002	S	CS-1 (0.5-1)	07.22.2020 12:05	SW8021B	BTEX by EPA 8021B	07.31.2020	08.05.2020	JKR	BR4FBZ BZ BZME EBZ	
668308-003	S	CS-1 (1.5-2)	07.22.2020 12:10	E300_CL	Chloride by EPA 300	07.31.2020	08.19.2020	JKR	CL	
668308-003	S	CS-1 (1.5-2)	07.22.2020 12:10	SW8021B	BTEX by EPA 8021B	07.31.2020	08.05.2020	JKR	BR4FBZ BZ BZME EBZ	
668308-003	S	CS-1 (1.5-2)	07.22.2020 12:10	SW8015MOD_NM	TPH by SW8015 Mod	07.31.2020	08.05.2020	JKR	PHCC10C28 PHCC28C3	
668308-004	S	CS-2 (0-0.5)	07.22.2020 12:20	E300_CL	Chloride by EPA 300	07.31.2020	08.19.2020	JKR	CL	
668308-004	S	CS-2 (0-0.5)	07.22.2020 12:20	SW8015MOD_NM	TPH by SW8015 Mod	07.31.2020	08.05.2020	JKR	PHCC10C28 PHCC28C3	
668308-004	S	CS-2 (0-0.5)	07.22.2020 12:20	SW8021B	BTEX by EPA 8021B	07.31.2020	08.05.2020	JKR	BR4FBZ BZ BZME EBZ	
668308-005	S	CS-2 (0.5-1)	07.22.2020 12:25	SW8015MOD_NM	TPH by SW8015 Mod	07.31.2020	08.05.2020	JKR	PHCC10C28 PHCC28C3	
668308-005	S	CS-2 (0.5-1)	07.22.2020 12:25	E300_CL	Chloride by EPA 300	07.31.2020	08.19.2020	JKR	CL	
668308-005	S	CS-2 (0.5-1)	07.22.2020 12:25	SW8021B	BTEX by EPA 8021B	07.31.2020	08.05.2020	JKR	BR4FBZ BZ BZME EBZ	
668308-006	S	CS-3 (0-0.5)	07.22.2020 12:30	E300_CL	Chloride by EPA 300	07.31.2020	08.19.2020	JKR	CL	
668308-006	S	CS-3 (0-0.5)	07.22.2020 12:30	SW8015MOD_NM	TPH by SW8015 Mod	07.31.2020	08.05.2020	JKR	PHCC10C28 PHCC28C3	
668308-006	S	CS-3 (0-0.5)	07.22.2020 12:30	SW8021B	BTEX by EPA 8021B	07.31.2020	08.05.2020	JKR	BR4FBZ BZ BZME EBZ	
668308-007	S	CS-3 (0.5-1)	07.22.2020 12:35	SW8021B	BTEX by EPA 8021B	07.31.2020	08.05.2020	JKR	BR4FBZ BZ BZME EBZ	
668308-007	S	CS-3 (0.5-1)	07.22.2020 12:35	SW8015MOD_NM	TPH by SW8015 Mod	07.31.2020	08.05.2020	JKR	PHCC10C28 PHCC28C3	
668308-007	S	CS-3 (0.5-1)	07.22.2020 12:35	E300_CL	Chloride by EPA 300	07.31.2020	08.19.2020	JKR	CL	
668308-008	S	CS-4 (0-0.5)	07.22.2020 12:40	SW8015MOD_NM	TPH by SW8015 Mod	07.31.2020	08.05.2020	JKR	PHCC10C28 PHCC28C3	
668308-008	S	CS-4 (0-0.5)	07.22.2020 12:40	E300_CL	Chloride by EPA 300	07.31.2020	08.19.2020	JKR	CL	
668308-008	S	CS-4 (0-0.5)	07.22.2020 12:40	SW8021B	BTEX by EPA 8021B	07.31.2020	08.05.2020	JKR	BR4FBZ BZ BZME EBZ	
668308-009	S	CS-4 (0.5-1)	07.22.2020 12:45	SW8015MOD_NM	TPH by SW8015 Mod	07.31.2020	08.05.2020	JKR	PHCC10C28 PHCC28C3	

Inter-Office Shipment

IOS Number : 67782

Date/Time:	07.28.2020	Created by:	Michael J Turner	Please send report to:	Jessica Kramer
Lab# From:	**Lubbock**	Delivery Priority:		Address:	6701 Aberdeen, Suite 9 Lubbock, TX 79424
Lab# To:	**Midland**	Air Bill No.:	771116192074	E-Mail:	jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
668308-009	S	CS-4 (0.5-1)	07.22.2020 12:45	E300_CL	Chloride by EPA 300	07.31.2020	08.19.2020	JKR	CL	
668308-009	S	CS-4 (0.5-1)	07.22.2020 12:45	SW8021B	BTEX by EPA 8021B	07.31.2020	08.05.2020	JKR	BR4FBZ BZ BZME EBZ	

Inter Office Shipment or Sample Comments:

Relinquished By: Michael J Turner

Date Relinquished: 07.28.2020

Received By: Brianna Teel

Date Received: 07.29.2020

Cooler Temperature: 0.1

Eurofins Xenco, LLC

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 67782

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used : IR-8

Sent By: Michael J Turner **Date Sent:** 07.28.2020 10.51 AM

Received By: Brianna Teel **Date Received:** 07.29.2020 10.15 AM

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

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

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

Checklist reviewed by: Brianna Teel Date: 07.29.2020

Brianna Teel

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Terracon-Lubbock

Date/ Time Received: 07.27.2020 04.36.00 PM

Work Order #: 668308

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

Temperature Measuring device used : IR-4

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	-1.1	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**	
#5 Custody Seals intact on sample bottles?	**N/A**	
#6*Custody Seals Signed and dated?	**N/A**	
#7 *Chain of Custody present?	**Yes**	
#8 Any missing/extra samples?	**No**	
#9 Chain of Custody signed when relinquished/ received?	**Yes**	
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**	
#11 Container label(s) legible and intact?	**Yes**	
#12 Samples in proper container/ bottle?	**Yes**	
#13 Samples properly preserved?	**Yes**	
#14 Sample container(s) intact?	**Yes**	
#15 Sufficient sample amount for indicated test(s)?	**Yes**	
#16 All samples received within hold time?	**Yes**	
#17 Subcontract of sample(s)?	**Yes**	Xenco Midland
#18 Water VOC samples have zero headspace?	**N/A**	

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

Analyst: PH Device/Lot#:

Checklist completed by: Michael J Turner Date: 07.27.2020

Checklist reviewed by: Jessica Kramer Date: 07.28.2020

Analytical Report 647723

for

Terracon-Lubbock

Project Manager: Brett Dennis

Spur-Skelly 704

AR197355

07-JAN-20

Collected By: Client

6701 Aberdeen, Suite 9 Lubbock, TX 79424

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

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

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

Table of Contents

07-JAN-20

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

Reference: XENCO Report No(s): **647723**
Spur-Skelly 704
Project Address:

Brett Dennis:

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) 647723. 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. 647723 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,

Holly Taylor

Holly Taylor
Project Manager

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 647723

Terracon-Lubbock, Lubbock, TX

Spur-Skelly 704

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
HA-1 (0-0.5')	S	12-30-19 14:30	0 - 0.5 ft	647723-001
HA-1 (0.5-1')	S	12-30-19 14:35	0.5 - 1 ft	647723-002
HA-1 (1-1.5')	S	12-30-19 14:40	1 - 1.5 ft	647723-003
HA-2 (0-0.5')	S	12-30-19 14:50	0 - 0.5 ft	647723-004
HA-3 (0-0.5')	S	12-30-19 15:15	0 - 0.5 ft	647723-005
HA-3 (0.5-1')	S	12-30-19 15:20	0.5 - 1 ft	647723-006
HA-3 (1-1.5')	S	12-30-19 15:25	1 - 1.5 ft	647723-007
HA-4 (0-0.5')	S	12-30-19 15:35	0 - 0.5 ft	647723-008
HA-5 (0-0.5')	S	12-30-19 15:45	0 - 0.5 ft	647723-009
HA-5 (0.5-1')	S	12-30-19 15:50	0.5 - 1 ft	Not Analyzed

CASE NARRATIVE

Client Name: Terracon-Lubbock

Project Name: Spur-Skelly 704

Project ID: *AR197355*
Work Order Number(s): *647723*

Report Date: *07-JAN-20*
Date Received: *12/31/2019*

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-3112474 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3112475 TPH GRO by EPA 8015 Mod.
Surrogate 4-Bromofluorobenzene recovered below QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 647723-003,647723-007,647723-002.

Certificate of Analytical Results

647723

Terracon-Lubbock, Lubbock, TX

Spur-Skelly 704

Sample Id: **HA-1 (0-0.5')** Matrix: Soil Sample Depth: 0 - 0.5 ft

Lab Sample Id: 647723-001 Date Collected: 12.30.19 14.30 Date Received: 12.31.19 12.22

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Analyst: JYM % Moist: Tech: JYM

Seq Number: 3112422 Date Prep: 01.06.20 08.27

Subcontractor: SUB: T104704215-19-30 Prep seq: 7693727

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**838**	9.98	0.353	mg/kg	01.06.20 09:51		1

Analytical Method: DRO-ORO By SW8015B Prep Method: 8015

Analyst: MIT % Moist: Tech: MIT

Seq Number: 3112479 Date Prep: 01.06.20 15.00

Prep seq: 7693803

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Diesel Range Organics (DRO)	C10C28DRO	<7.49	25.0	7.49	mg/kg	01.07.20 02:06	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.49	25.0	7.49	mg/kg	01.07.20 02:06	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Tricosane	85	65 - 144	%		
n-Triacontane	84	46 - 152	%		

Analytical Method: TPH GRO by EPA 8015 Mod. Prep Method: 5030B

Analyst: MIT % Moist: Tech: MIT

Seq Number: 3112475 Date Prep: 01.06.20 12.30

Prep seq: 7693797

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
TPH-GRO	8006-61-9	<0.265	3.91	0.265	mg/kg	01.06.20 22:38	U	20

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	76	76 - 123	%		
a,a,a-Trifluorotoluene	80	69 - 120	%		

Certificate of Analytical Results
647723
Terracon-Lubbock, Lubbock, TX
Spur-Skelly 704

Sample Id: **HA-1 (0-0.5')** Matrix: Soil Sample Depth: 0 - 0.5 ft

Lab Sample Id: 647723-001 Date Collected: 12.30.19 14.30 Date Received: 12.31.19 12.22

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: MIT % Moist: Tech: MIT

Seq Number: 3112474 Date Prep: 01.06.20 12.30

Prep seq: 7693796

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00883	0.0195	0.00883	mg/kg	01.06.20 22:38	U	20
Toluene	108-88-3	<0.00457	0.0195	0.00457	mg/kg	01.06.20 22:38	U	20
Ethylbenzene	100-41-4	<0.00602	0.0195	0.00602	mg/kg	01.06.20 22:38	U	20
m,p-Xylenes	179601-23-1	<0.00666	0.0391	0.00666	mg/kg	01.06.20 22:38	U	20
o-Xylene	95-47-6	<0.00666	0.0195	0.00666	mg/kg	01.06.20 22:38	U	20
Total Xylenes	1330-20-7	<0.00666		0.00666	mg/kg	01.06.20 22:38	U	
Total BTEX		<0.00457		0.00457	mg/kg	01.06.20 22:38	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	85	68 - 120	%		
a,a,a-Trifluorotoluene	97	71 - 121	%		

Certificate of Analytical Results

647723

Terracon-Lubbock, Lubbock, TX

Spur-Skelly 704

Sample Id: **HA-1 (0.5-1')** Matrix: Soil Sample Depth: 0.5 - 1 ft

Lab Sample Id: 647723-002 Date Collected: 12.30.19 14.35 Date Received: 12.31.19 12.22

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Analyst: JYM % Moist: Tech: JYM

Seq Number: 3112422 Date Prep: 01.06.20 08.27

Subcontractor: SUB: T104704215-19-30 Prep seq: 7693727

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**842**	10.2	0.360	mg/kg	01.06.20 10:27		1

Analytical Method: DRO-ORO By SW8015B Prep Method: 8015

Analyst: MIT % Moist: Tech: MIT

Seq Number: 3112479 Date Prep: 01.06.20 15.00

Prep seq: 7693803

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Diesel Range Organics (DRO)	C10C28DRO	<7.54	25.2	7.54	mg/kg	01.07.20 04:29	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.54	25.2	7.54	mg/kg	01.07.20 04:29	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Tricosane	99	65 - 144	%		
n-Triacontane	98	46 - 152	%		

Analytical Method: TPH GRO by EPA 8015 Mod. Prep Method: 5030B

Analyst: MIT % Moist: Tech: MIT

Seq Number: 3112475 Date Prep: 01.06.20 12.30

Prep seq: 7693797

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
TPH-GRO	8006-61-9	<0.266	3.93	0.266	mg/kg	01.07.20 01:03	U	20

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	72	76 - 123	%		**
a,a,a-Trifluorotoluene	76	69 - 120	%		

Certificate of Analytical Results
647723
Terracon-Lubbock, Lubbock, TX
Spur-Skelly 704

Sample Id: **HA-1 (1-1.5')** Matrix: Soil Sample Depth: 1 - 1.5 ft

Lab Sample Id: 647723-003 Date Collected: 12.30.19 14.40 Date Received: 12.31.19 12.22

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Analyst: JYM % Moist: Tech: JYM

Seq Number: 3112422 Date Prep: 01.06.20 08.27

Subcontractor: SUB: T104704215-19-30 Prep seq: 7693727

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**784**	9.94	0.352	mg/kg	01.06.20 10:39		1

Analytical Method: DRO-ORO By SW8015B Prep Method: 8015

Analyst: MIT % Moist: Tech: MIT

Seq Number: 3112479 Date Prep: 01.06.20 15.00

Prep seq: 7693803

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Diesel Range Organics (DRO)	C10C28DRO	<7.53	25.2	7.53	mg/kg	01.07.20 05:07	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.53	25.2	7.53	mg/kg	01.07.20 05:07	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Tricosane	80	65 - 144	%		
n-Triacontane	83	46 - 152	%		

Analytical Method: TPH GRO by EPA 8015 Mod. Prep Method: 5030B

Analyst: MIT % Moist: Tech: MIT

Seq Number: 3112475 Date Prep: 01.06.20 12.30

Prep seq: 7693797

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
TPH-GRO	8006-61-9	<0.252	3.72	0.252	mg/kg	01.07.20 01:28	U	19

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	75	76 - 123	%		**
a,a,a-Trifluorotoluene	79	69 - 120	%		

Certificate of Analytical Results

647723

Terracon-Lubbock, Lubbock, TX

Spur-Skelly 704

Sample Id: **HA-2 (0-0.5')** Matrix: Soil Sample Depth: 0 - 0.5 ft

Lab Sample Id: 647723-004 Date Collected: 12.30.19 14.50 Date Received: 12.31.19 12.22

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Analyst: JYM % Moist: Tech: JYM

Seq Number: 3112422 Date Prep: 01.06.20 08.27

Subcontractor: SUB: T104704215-19-30 Prep seq: 7693727

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**1240**	9.88	0.350	mg/kg	01.06.20 10:51		1

Analytical Method: DRO-ORO By SW8015B Prep Method: 8015

Analyst: MIT % Moist: Tech: MIT

Seq Number: 3112479 Date Prep: 01.06.20 15.00

Prep seq: 7693803

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Diesel Range Organics (DRO)	C10C28DRO	<7.47	25.0	7.47	mg/kg	01.07.20 05:45	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.47	25.0	7.47	mg/kg	01.07.20 05:45	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Tricosane	86	65 - 144	%		
n-Triacontane	96	46 - 152	%		

Analytical Method: TPH GRO by EPA 8015 Mod. Prep Method: 5030B

Analyst: MIT % Moist: Tech: MIT

Seq Number: 3112475 Date Prep: 01.06.20 12.30

Prep seq: 7693797

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
TPH-GRO	8006-61-9	<0.272	4.01	0.272	mg/kg	01.07.20 01:51	U	20

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	89	76 - 123	%		
a,a,a-Trifluorotoluene	95	69 - 120	%		

Certificate of Analytical Results
647723
Terracon-Lubbock, Lubbock, TX
Spur-Skelly 704

Sample Id: **HA-2 (0-0.5')** Matrix: Soil Sample Depth: 0 - 0.5 ft

Lab Sample Id: 647723-004 Date Collected: 12.30.19 14.50 Date Received: 12.31.19 12.22

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: MIT % Moist: Tech: MIT

Seq Number: 3112474 Date Prep: 01.06.20 12.30

Prep seq: 7693796

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00906	0.0200	0.00906	mg/kg	01.07.20 01:51	U	20
Toluene	108-88-3	<0.00469	0.0200	0.00469	mg/kg	01.07.20 01:51	U	20
Ethylbenzene	100-41-4	<0.00617	0.0200	0.00617	mg/kg	01.07.20 01:51	U	20
m,p-Xylenes	179601-23-1	<0.00683	0.0401	0.00683	mg/kg	01.07.20 01:51	U	20
o-Xylene	95-47-6	<0.00683	0.0200	0.00683	mg/kg	01.07.20 01:51	U	20
Total Xylenes	1330-20-7	<0.00683		0.00683	mg/kg	01.07.20 01:51	U	
Total BTEX		<0.00469		0.00469	mg/kg	01.07.20 01:51	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	100	68 - 120	%		
a,a,a-Trifluorotoluene	115	71 - 121	%		

Certificate of Analytical Results

647723

Terracon-Lubbock, Lubbock, TX

Spur-Skelly 704

Sample Id: **HA-3 (0-0.5')** Matrix: Soil Sample Depth: 0 - 0.5 ft

Lab Sample Id: 647723-005 Date Collected: 12.30.19 15.15 Date Received: 12.31.19 12.22

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Analyst: JYM % Moist: Tech: JYM

Seq Number: 3112422 Date Prep: 01.06.20 08.27

Subcontractor: SUB: T104704215-19-30 Prep seq: 7693727

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**5980**	99.8	3.53	mg/kg	01.06.20 11:03		10

Analytical Method: DRO-ORO By SW8015B Prep Method: 8015

Analyst: MIT % Moist: Tech: MIT

Seq Number: 3112479 Date Prep: 01.06.20 15.00

Prep seq: 7693803

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Diesel Range Organics (DRO)	C10C28DRO	<7.50	25.1	7.50	mg/kg	01.07.20 06:20	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.50	25.1	7.50	mg/kg	01.07.20 06:20	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Tricosane	86	65 - 144	%		
n-Triacontane	96	46 - 152	%		

Analytical Method: TPH GRO by EPA 8015 Mod. Prep Method: 5030B

Analyst: MIT % Moist: Tech: MIT

Seq Number: 3112475 Date Prep: 01.06.20 12.30

Prep seq: 7693797

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
TPH-GRO	8006-61-9	<0.241	3.56	0.241	mg/kg	01.07.20 02:15	U	18

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	77	76 - 123	%		
a,a,a-Trifluorotoluene	80	69 - 120	%		

Certificate of Analytical Results
647723
Terracon-Lubbock, Lubbock, TX
Spur-Skelly 704

Sample Id: **HA-3 (0-0.5')** Matrix: Soil Sample Depth: 0 - 0.5 ft

Lab Sample Id: 647723-005 Date Collected: 12.30.19 15.15 Date Received: 12.31.19 12.22

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: MIT % Moist: Tech: MIT

Seq Number: 3112474 Date Prep: 01.06.20 12.30

Prep seq: 7693796

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00804	0.0178	0.00804	mg/kg	01.07.20 02:15	U	18
Toluene	108-88-3	<0.00416	0.0178	0.00416	mg/kg	01.07.20 02:15	U	18
Ethylbenzene	100-41-4	<0.00548	0.0178	0.00548	mg/kg	01.07.20 02:15	U	18
m,p-Xylenes	179601-23-1	<0.00607	0.0356	0.00607	mg/kg	01.07.20 02:15	U	18
o-Xylene	95-47-6	<0.00607	0.0178	0.00607	mg/kg	01.07.20 02:15	U	18
Total Xylenes	1330-20-7	<0.00607		0.00607	mg/kg	01.07.20 02:15	U	
Total BTEX		<0.00416		0.00416	mg/kg	01.07.20 02:15	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	86	68 - 120	%		
a,a,a-Trifluorotoluene	97	71 - 121	%		

Certificate of Analytical Results

647723

Terracon-Lubbock, Lubbock, TX

Spur-Skelly 704

Sample Id: **HA-3 (0.5-1')** Matrix: Soil Sample Depth: 0.5 - 1 ft

Lab Sample Id: 647723-006 Date Collected: 12.30.19 15.20 Date Received: 12.31.19 12.22

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Analyst: JYM % Moist: Tech: JYM

Seq Number: 3112422 Date Prep: 01.06.20 08.27

Subcontractor: SUB: T104704215-19-30 Prep seq: 7693727

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**2600**	10.1	0.358	mg/kg	01.06.20 11:39		1

Analytical Method: DRO-ORO By SW8015B Prep Method: 8015

Analyst: MIT % Moist: Tech: MIT

Seq Number: 3112479 Date Prep: 01.06.20 15.00

Prep seq: 7693803

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Diesel Range Organics (DRO)	C10C28DRO	<7.51	25.1	7.51	mg/kg	01.07.20 06:56	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.51	25.1	7.51	mg/kg	01.07.20 06:56	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Tricosane	90	65 - 144	%		
n-Triacontane	96	46 - 152	%		

Analytical Method: TPH GRO by EPA 8015 Mod. Prep Method: 5030B

Analyst: MIT % Moist: Tech: MIT

Seq Number: 3112475 Date Prep: 01.06.20 12.30

Prep seq: 7693797

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
TPH-GRO	8006-61-9	<0.240	3.54	0.240	mg/kg	01.07.20 02:39	U	18

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	79	76 - 123	%		
a,a,a-Trifluorotoluene	84	69 - 120	%		

Certificate of Analytical Results

647723

Terracon-Lubbock, Lubbock, TX

Spur-Skelly 704

Sample Id: **HA-3 (1-1.5')** Matrix: Soil Sample Depth: 1 - 1.5 ft

Lab Sample Id: 647723-007 Date Collected: 12.30.19 15.25 Date Received: 12.31.19 12.22

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Analyst: JYM % Moist: Tech: JYM

Seq Number: 3112422 Date Prep: 01.06.20 08.27

Subcontractor: SUB: T104704215-19-30 Prep seq: 7693727

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**580**	10.1	0.356	mg/kg	01.06.20 11:51		1

Analytical Method: DRO-ORO By SW8015B Prep Method: 8015

Analyst: MIT % Moist: Tech: MIT

Seq Number: 3112479 Date Prep: 01.06.20 15.00

Prep seq: 7693803

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Diesel Range Organics (DRO)	C10C28DRO	<7.55	25.2	7.55	mg/kg	01.07.20 07:34	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.55	25.2	7.55	mg/kg	01.07.20 07:34	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Tricosane	97	65 - 144	%		
n-Triacontane	114	46 - 152	%		

Analytical Method: TPH GRO by EPA 8015 Mod. Prep Method: 5030B

Analyst: MIT % Moist: Tech: MIT

Seq Number: 3112475 Date Prep: 01.06.20 12.30

Prep seq: 7693797

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
TPH-GRO	8006-61-9	<0.248	3.66	0.248	mg/kg	01.07.20 03:03	U	18

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	73	76 - 123	%		**
a,a,a-Trifluorotoluene	79	69 - 120	%		

Certificate of Analytical Results
647723
Terracon-Lubbock, Lubbock, TX
Spur-Skelly 704

Sample Id: **HA-4 (0-0.5')** Matrix: Soil Sample Depth: 0 - 0.5 ft

Lab Sample Id: 647723-008 Date Collected: 12.30.19 15.35 Date Received: 12.31.19 12.22

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Analyst: JYM % Moist: Tech: JYM

Seq Number: 3112422 Date Prep: 01.06.20 08.27

Subcontractor: SUB: T104704215-19-30 Prep seq: 7693727

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**8460**	100	3.55	mg/kg	01.06.20 12:03		10

Analytical Method: DRO-ORO By SW8015B Prep Method: 8015

Analyst: MIT % Moist: Tech: MIT

Seq Number: 3112479 Date Prep: 01.06.20 15.00

Prep seq: 7693803

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Diesel Range Organics (DRO)	C10C28DRO	<7.53	25.2	7.53	mg/kg	01.07.20 08:07	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.53	25.2	7.53	mg/kg	01.07.20 08:07	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Tricosane	75	65 - 144	%		
n-Triacontane	89	46 - 152	%		

Analytical Method: TPH GRO by EPA 8015 Mod. Prep Method: 5030B

Analyst: MIT % Moist: Tech: MIT

Seq Number: 3112475 Date Prep: 01.06.20 12.30

Prep seq: 7693797

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
TPH-GRO	8006-61-9	<0.253	3.74	0.253	mg/kg	01.07.20 03:27	U	19

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	84	76 - 123	%		
a,a,a-Trifluorotoluene	88	69 - 120	%		

Certificate of Analytical Results
647723
Terracon-Lubbock, Lubbock, TX
Spur-Skelly 704

Sample Id: **HA-4 (0-0.5')** Matrix: Soil Sample Depth: 0 - 0.5 ft

Lab Sample Id: 647723-008 Date Collected: 12.30.19 15.35 Date Received: 12.31.19 12.22

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: MIT % Moist: Tech: MIT

Seq Number: 3112474 Date Prep: 01.06.20 12.30

Prep seq: 7693796

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00845	0.0187	0.00845	mg/kg	01.07.20 03:27	U	19
Toluene	108-88-3	<0.00437	0.0187	0.00437	mg/kg	01.07.20 03:27	U	19
Ethylbenzene	100-41-4	<0.00576	0.0187	0.00576	mg/kg	01.07.20 03:27	U	19
m,p-Xylenes	179601-23-1	<0.00637	0.0374	0.00637	mg/kg	01.07.20 03:27	U	19
o-Xylene	95-47-6	<0.00637	0.0187	0.00637	mg/kg	01.07.20 03:27	U	19
Total Xylenes	1330-20-7	<0.00637		0.00637	mg/kg	01.07.20 03:27	U	
Total BTEX		<0.00437		0.00437	mg/kg	01.07.20 03:27	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	93	68 - 120	%		
a,a,a-Trifluorotoluene	107	71 - 121	%		

Certificate of Analytical Results

647723

Terracon-Lubbock, Lubbock, TX

Spur-Skelly 704

Sample Id: **HA-5 (0-0.5')** Matrix: Soil Sample Depth: 0 - 0.5 ft

Lab Sample Id: 647723-009 Date Collected: 12.30.19 15.45 Date Received: 12.31.19 12.22

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Analyst: JYM % Moist: Tech: JYM

Seq Number: 3112422 Date Prep: 01.06.20 08.27

Subcontractor: SUB: T104704215-19-30 Prep seq: 7693727

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	**41.5**	10.0	0.355	mg/kg	01.06.20 12:15		1

Analytical Method: DRO-ORO By SW8015B Prep Method: 8015

Analyst: MIT % Moist: Tech: MIT

Seq Number: 3112479 Date Prep: 01.06.20 15.00

Prep seq: 7693803

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Diesel Range Organics (DRO)	C10C28DRO	<7.44	24.9	7.44	mg/kg	01.07.20 08:43	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.44	24.9	7.44	mg/kg	01.07.20 08:43	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Tricosane	77	65 - 144	%		
n-Triacontane	89	46 - 152	%		

Analytical Method: TPH GRO by EPA 8015 Mod. Prep Method: 5030B

Analyst: MIT % Moist: Tech: MIT

Seq Number: 3112475 Date Prep: 01.06.20 12.30

Prep seq: 7693797

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
TPH-GRO	8006-61-9	<0.269	3.97	0.269	mg/kg	01.07.20 03:51	U	20

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	79	76 - 123	%		
a,a,a-Trifluorotoluene	83	69 - 120	%		

Certificate of Analytical Results
647723
Terracon-Lubbock, Lubbock, TX
Spur-Skelly 704

Sample Id: **HA-5 (0-0.5')** Matrix: Soil Sample Depth: 0 - 0.5 ft

Lab Sample Id: 647723-009 Date Collected: 12.30.19 15.45 Date Received: 12.31.19 12.22

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: MIT % Moist: Tech: MIT

Seq Number: 3112474 Date Prep: 01.06.20 12.30

Prep seq: 7693796

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00897	0.0198	0.00897	mg/kg	01.07.20 03:51	U	20
Toluene	108-88-3	<0.00464	0.0198	0.00464	mg/kg	01.07.20 03:51	U	20
Ethylbenzene	100-41-4	<0.00611	0.0198	0.00611	mg/kg	01.07.20 03:51	U	20
m,p-Xylenes	179601-23-1	<0.00677	0.0397	0.00677	mg/kg	01.07.20 03:51	U	20
o-Xylene	95-47-6	<0.00677	0.0198	0.00677	mg/kg	01.07.20 03:51	U	20
Total Xylenes	1330-20-7	<0.00677		0.00677	mg/kg	01.07.20 03:51	U	
Total BTEX		<0.00464		0.00464	mg/kg	01.07.20 03:51	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	89	68 - 120	%		
a,a,a-Trifluorotoluene	102	71 - 121	%		

Certificate of Analytical Results

647723

Terracon-Lubbock, Lubbock, TX

Spur-Skelly 704

Sample Id: **7693727-1-BLK** Matrix: Solid Sample Depth:

Lab Sample Id: 7693727-1-BLK Date Collected: Date Received:

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Analyst: JYM % Moist: Tech: JYM

Seq Number: 3112422 Date Prep: 01.06.20 08.27

Subcontractor: SUB: T104704215-19-30 Prep seq: 7693727

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	<0.354	10.0	0.354	mg/kg	01.06.20 09:15	U	1

Sample Id: **7693796-1-BLK** Matrix: Solid Sample Depth:

Lab Sample Id: 7693796-1-BLK Date Collected: Date Received:

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B

Analyst: MIT % Moist: Tech: MIT

Seq Number: 3112474 Date Prep: 01.06.20 12.30

Prep seq: 7693796

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00904	0.0200	0.00904	mg/kg	01.06.20 18:13	U	20
Toluene	108-88-3	<0.00468	0.0200	0.00468	mg/kg	01.06.20 18:13	U	20
Ethylbenzene	100-41-4	<0.00616	0.0200	0.00616	mg/kg	01.06.20 18:13	U	20
m,p-Xylenes	179601-23-1	<0.00682	0.0400	0.00682	mg/kg	01.06.20 18:13	U	20
o-Xylene	95-47-6	<0.00682	0.0200	0.00682	mg/kg	01.06.20 18:13	U	20

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	108	68 - 120	%		
a,a,a-Trifluorotoluene	120	71 - 121	%		

Sample Id: **7693797-1-BLK** Matrix: Solid Sample Depth:

Lab Sample Id: 7693797-1-BLK Date Collected: Date Received:

Analytical Method: TPH GRO by EPA 8015 Mod. Prep Method: 5030B

Analyst: MIT % Moist: Tech: MIT

Seq Number: 3112475 Date Prep: 01.06.20 12.30

Prep seq: 7693797

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
TPH-GRO	8006-61-9	<0.271	4.00	0.271	mg/kg	01.06.20 18:13	U	20

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	97	76 - 123	%		
a,a,a-Trifluorotoluene	99	69 - 120	%		

Certificate of Analytical Results

647723

Terracon-Lubbock, Lubbock, TX

Spur-Skelly 704

Sample Id: **7693803-1-BLK** Matrix: Solid Sample Depth:

Lab Sample Id: 7693803-1-BLK Date Collected: Date Received:

Analytical Method: DRO-ORO By SW8015B Prep Method: 8015

Analyst: MIT % Moist: Tech: MIT

Seq Number: 3112479 Date Prep: 01.06.20 15.00

Prep seq: 7693803

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Diesel Range Organics (DRO)	C10C28DRO	<7.48	25.0	7.48	mg/kg	01.06.20 21:18	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.48	25.0	7.48	mg/kg	01.06.20 21:18	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Tricosane	108	65 - 144	%		
n-Triacontane	95	46 - 152	%		

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

Form 2 - Surrogate Recoveries

Project Name: Spur-Skelly 704

Work Orders : 647723,

Project ID: AR197355

Lab Batch #: 3112474 **Sample:** 7693796-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01/06/20 15:43

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.0748	0.100	75	68-120	
a,a,a-Trifluorotoluene	1.69	2.00	85	71-121	

Lab Batch #: 3112474 **Sample:** 7693796-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01/06/20 16:12

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.111	0.100	111	68-120	
a,a,a-Trifluorotoluene	2.33	2.00	117	71-121	

Lab Batch #: 3112474 **Sample:** 7693796-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01/06/20 18:13

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.108	0.100	108	68-120	
a,a,a-Trifluorotoluene	2.40	2.00	120	71-121	

Lab Batch #: 3112474 **Sample:** 647723-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 01/06/20 23:03

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.0794	0.100	79	68-120	
a,a,a-Trifluorotoluene	1.88	1.97	95	71-121	

Lab Batch #: 3112474 **Sample:** 647723-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 01/06/20 23:27

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.0815	0.100	82	68-120	
a,a,a-Trifluorotoluene	1.95	1.98	98	71-121	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Spur-Skelly 704

Work Orders : 647723,

Project ID: AR197355

Lab Batch #: 3112479 **Sample:** 7693803-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01/06/20 18:50

DRO-ORO By SW8015B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Tricosane	10.6	10.0	106	65-144	
n-Triacontane	8.53	10.0	85	46-152	

Lab Batch #: 3112479 **Sample:** 7693803-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01/06/20 19:26

DRO-ORO By SW8015B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Tricosane	9.87	10.0	99	65-144	
n-Triacontane	8.61	10.0	86	46-152	

Lab Batch #: 3112479 **Sample:** 7693803-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01/06/20 21:18

DRO-ORO By SW8015B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Tricosane	10.8	10.0	108	65-144	
n-Triacontane	9.48	10.0	95	46-152	

Lab Batch #: 3112479 **Sample:** 647723-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 01/07/20 02:41

DRO-ORO By SW8015B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Tricosane	8.65	10.1	86	65-144	
n-Triacontane	9.65	10.1	96	46-152	

Lab Batch #: 3112479 **Sample:** 647723-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 01/07/20 03:19

DRO-ORO By SW8015B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Tricosane	8.63	9.93	87	65-144	
n-Triacontane	8.64	9.93	87	46-152	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Spur-Skelly 704

Work Orders : 647723,

Project ID: AR197355

Lab Batch #: 3112475 **Sample:** 7693797-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01/06/20 16:36

SURROGATE RECOVERY STUDY

TPH GRO by EPA 8015 Mod. Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.125	0.100	125	76-123	**
a,a,a-Trifluorotoluene	1.83	2.00	92	69-120	

Lab Batch #: 3112475 **Sample:** 7693797-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01/06/20 17:00

SURROGATE RECOVERY STUDY

TPH GRO by EPA 8015 Mod. Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.116	0.100	116	76-123	
a,a,a-Trifluorotoluene	1.60	2.00	80	69-120	

Lab Batch #: 3112475 **Sample:** 7693797-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01/06/20 18:13

SURROGATE RECOVERY STUDY

TPH GRO by EPA 8015 Mod. Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.0967	0.100	97	76-123	
a,a,a-Trifluorotoluene	1.98	2.00	99	69-120	

Lab Batch #: 3112475 **Sample:** 647723-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 01/06/20 23:51

SURROGATE RECOVERY STUDY

TPH GRO by EPA 8015 Mod. Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.111	0.100	111	76-123	
a,a,a-Trifluorotoluene	1.78	2.00	89	69-120	

Lab Batch #: 3112475 **Sample:** 647723-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 01/07/20 00:16

SURROGATE RECOVERY STUDY

TPH GRO by EPA 8015 Mod. Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.0923	0.100	92	76-123	
a,a,a-Trifluorotoluene	1.81	2.00	91	69-120	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

BS / BSD Recoveries

Project Name: Spur-Skelly 704

Work Order #: 647723 **Project ID:** AR197355

Analyst: MIT **Date Prepared:** 01/06/2020 **Date Analyzed:** 01/06/2020

Lab Batch ID: 3112474 **Sample:** 7693796-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00904	2.00	1.78	89	2.00	1.78	89	0	55-120	20	
Toluene	<0.00468	2.00	1.78	89	2.00	1.89	95	6	77-120	20	
Ethylbenzene	<0.00616	2.00	1.88	94	2.00	2.04	102	8	77-120	20	
m,p-Xylenes	<0.00682	4.00	3.77	94	4.00	4.06	102	7	78-120	20	
o-Xylene	<0.00682	2.00	1.93	97	2.00	2.03	102	5	78-120	20	

Analyst: JYM **Date Prepared:** 01/06/2020 **Date Analyzed:** 01/06/2020

Lab Batch ID: 3112422 **Sample:** 7693727-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<0.354	100	107	107	100	107	107	0	80-120	20	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

BS / BSD Recoveries

Project Name: Spur-Skelly 704

Work Order #: 647723 **Project ID:** AR197355

Analyst: MIT **Date Prepared:** 01/06/2020 **Date Analyzed:** 01/06/2020

Lab Batch ID: 3112479 **Sample:** 7693803-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

DRO-ORO By SW8015B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Diesel Range Organics (DRO)	<7.48	100	88.1	88	100	101	101	14	63-139	20	

Analyst: MIT **Date Prepared:** 01/06/2020 **Date Analyzed:** 01/06/2020

Lab Batch ID: 3112475 **Sample:** 7693797-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH GRO by EPA 8015 Mod. Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
TPH-GRO	<0.271	20.0	18.8	94	20.0	18.7	94	1	35-129	20	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Form 3 - MS / MSD Recoveries

Project Name: Spur-Skelly 704

Work Order # : 647723 **Project ID:** AR197355

Lab Batch ID: 3112474 **QC- Sample ID:** 647723-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 01/06/2020 **Date Prepared:** 01/06/2020 **Analyst:** MIT

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00890	1.97	1.71	87	1.98	1.71	86	0	54-120	25	
Toluene	<0.00461	1.97	1.81	92	1.98	1.80	91	1	57-120	25	
Ethylbenzene	<0.00606	1.97	1.82	92	1.98	1.87	94	3	58-131	25	
m,p-Xylenes	<0.00671	3.94	3.70	94	3.97	3.71	93	0	62-124	25	
o-Xylene	<0.00671	1.97	1.85	94	1.98	1.85	93	0	62-124	25	

Lab Batch ID: 3112422 **QC- Sample ID:** 647723-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 01/06/2020 **Date Prepared:** 01/06/2020 **Analyst:** JYM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	838	100	918	80	100	918	80	0	80-120	20	

Lab Batch ID: 3112479 **QC- Sample ID:** 647723-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 01/07/2020 **Date Prepared:** 01/06/2020 **Analyst:** MIT

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

DRO-ORO By SW8015B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Diesel Range Organics (DRO)	<7.53	101	95.6	95	99.3	83.3	84	14	63-139	20	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Form 3 - MS / MSD Recoveries

Project Name: Spur-Skelly 704

Work Order # : 647723 **Project ID:** AR197355

Lab Batch ID: 3112475 **QC- Sample ID:** 647723-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 01/06/2020 **Date Prepared:** 01/06/2020 **Analyst:** MIT

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH GRO by EPA 8015 Mod. Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
TPH-GRO	<0.271	20.0	17.3	87	20.0	19.8	99	13	35-129	20	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable

N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Terracon

CHAIN OF CUSTODY RECORD

Laboratory: Xenco
Address: 6701 Aberdeen
Lubbock, Texas 79424
Phone:
Contact:
SRS #:

Office Location: Lubbock
Project Manager: Brett Dennis
Sampler's Name: Brett Dennis
Sampler's Signature:

Project Number: AR197355
Project Name: Spur - Skelly 704

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE: 047723

TEMP OF COOLER WHEN RECEIVED (°C)

Page 1 of 1

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 4 oz Glass	Chloride (EPA Method 300)	TPH 8015 extended	BTEX (EPA Method 8021)	Hold	Lab Sample ID
S	12/30/19	1430		X	HA-1 (0-0.5')	0'	0.5'	1	X	X	X		1
S		1435			HA-1 (0.5-1')	0.5'	1'	1	X	X			2
S		1440			HA-1 (1-1.5')	1'	1.5'	1	X	X			3
S		1450			HA-2 (0-0.5')	0'	0.5'	1	X	X	X		4
S		1515			HA-3 (0-0.5')	0'	0.5'	1	X	X	X		5
S		1520			HA-3 (0.5-1')	0.5'	1'	1	X	X			6
S		1525			HA-3 (1-1.5')	1'	1.5'	1	X	X			7
S		1535			HA-4 (0-0.5')	0'	0.5'	1	X	X	X		8
S		1545			HA-5 (0-0.5')	0'	0.5'	1	X	X	X		9
S		1550			HA-5 (0.5-1')	0.5'	1'	1	X 300	X 300		X	10

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

TRRP Laboratory Review Checklist ☐ Yes ☐ No

Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time
	12/31/19	12:22		12/31/19	12:22
Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time
Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time
Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time

NOTES: ~~Bill directly to Plains Pipeline~~

e-mail results to:
irguesnier@terracon.com
brett.dennis@terracon.com

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

Inter-Office Shipment

IOS Number : 55273

Date/Time:	01.03.2020	Created by:	Brenda Ward	Please send report to:	Jessica Kramer
Lab# From:	**Lubbock**	Delivery Priority:		Address:	6701 Aberdeen, Suite 9 Lubbock, TX 79424
Lab# To:	**Houston**	Air Bill No.:	777390677997	E-Mail:	jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
647723-001	S	HA-1 (0-0.5')	12.30.2019 14:30	E300_CL	Chloride by EPA 300	01.07.2020	06.27.2020	JKR	CL	
647723-002	S	HA-1 (0.5-1')	12.30.2019 14:35	E300_CL	Chloride by EPA 300	01.07.2020	06.27.2020	JKR	CL	
647723-003	S	HA-1 (1-1.5')	12.30.2019 14:40	E300_CL	Chloride by EPA 300	01.07.2020	06.27.2020	JKR	CL	
647723-004	S	HA-2 (0-0.5')	12.30.2019 14:50	E300_CL	Chloride by EPA 300	01.07.2020	06.27.2020	JKR	CL	
647723-005	S	HA-3 (0-0.5')	12.30.2019 15:15	E300_CL	Chloride by EPA 300	01.07.2020	06.27.2020	JKR	CL	
647723-006	S	HA-3 (0.5-1')	12.30.2019 15:20	E300_CL	Chloride by EPA 300	01.07.2020	06.27.2020	JKR	CL	
647723-007	S	HA-3 (1-1.5')	12.30.2019 15:25	E300_CL	Chloride by EPA 300	01.07.2020	06.27.2020	JKR	CL	
647723-008	S	HA-4 (0-0.5')	12.30.2019 15:35	E300_CL	Chloride by EPA 300	01.07.2020	06.27.2020	JKR	CL	
647723-009	S	HA-5 (0-0.5')	12.30.2019 15:45	E300_CL	Chloride by EPA 300	01.07.2020	06.27.2020	JKR	CL	

Inter Office Shipment or Sample Comments:

Relinquished By: Brenda Ward

Brenda Ward

Date Relinquished: 01.03.2020

Received By: Abdhija Saidurga

Abdhija Saidurga

Date Received: 01.04.2020

Cooler Temperature: 1.8

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 55273

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

Sent By: Brenda Ward **Date Sent:** 01.03.2020 04.47 PM

Received By: Abdhija Saidurga **Date Received:** 01.04.2020 10.00 AM

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	1.8	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received with appropriate temperature?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**	
#5 *Custody Seals Signed and dated for Containers/coolers	**N/A**	
#6 *IOS present?	**Yes**	
#7 Any missing/extra samples?	**No**	
#8 IOS agrees with sample label(s)/matrix?	**Yes**	
#9 Sample matrix/ properties agree with IOS?	**Yes**	
#10 Samples in proper container/ bottle?	**Yes**	
#11 Samples properly preserved?	**Yes**	
#12 Sample container(s) intact?	**Yes**	
#13 Sufficient sample amount for indicated test(s)?	**Yes**	
#14 All samples received within hold time?	**Yes**	

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

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

Checklist reviewed by: Abdhija Saidurga Date: 01.04.2020

Abdhija Saidurga

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Certificate of Analysis Summary 677958

Terracon-Lubbock, Lubbock, TX

Project Name: Skelly 704

Project Id: AR197355
Contact: Joseph Guesnier
Project Location:

Date Received in Lab: Fri 11.13.2020 16:50
Report Date: 11.19.2020 14:37
Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	677958-001		677958-002		677958-003					
	Field Id:	CS-6 (0-0.5)		CS-6 (0.5-1)		CS-6 (1.5-2)					
	Depth:	0-0.5		0.5-1		1.5-2					
	Matrix:	SOIL		SOIL		SOIL					
	Sampled:	11.10.2020 13:00		11.10.2020 13:05		11.10.2020 13:10					
BTEX by EPA 8021B SUB: T104704400-20-21	***Extracted:***	11.18.2020 15:00		11.18.2020 15:00		11.18.2020 15:00					
	Analyzed:	11.19.2020 03:54		11.19.2020 10:24		11.19.2020 10:50					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00200	0.00200	0.00305	0.00200	<0.00200	0.00200				
Toluene		<0.00200	0.00200	0.00283	0.00200	<0.00200	0.00200				
Ethylbenzene		<0.00200	0.00200	0.00443	0.00200	<0.00200	0.00200				
m,p-Xylenes		<0.00399	0.00399	<0.00401	0.00401	<0.00401	0.00401				
o-Xylene		<0.00200	0.00200	0.00302	0.00200	<0.00200	0.00200				
Xylenes, Total		<0.002000	0.002000	0.003020	0.002000	<0.002000	0.002000				
Total BTEX		<0.002000	0.002000	0.01333	0.002000	<0.002000	0.002000				
Chloride by EPA 300 SUB: T104704400-20-21	***Extracted:***	11.18.2020 15:10		11.18.2020 15:10		11.18.2020 15:10					
	Analyzed:	11.18.2020 20:31		11.18.2020 20:38		11.18.2020 20:45					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		8.39	5.00	11.5	4.96	<4.99	4.99				
TPH by SW8015 Mod SUB: T104704400-20-21	***Extracted:***	11.18.2020 17:00		11.18.2020 17:00		11.18.2020 17:00					
	Analyzed:	11.19.2020 03:30		11.19.2020 04:30		11.19.2020 04:50					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<49.9	49.9	<49.9	49.9	<50.0	50.0				
Diesel Range Organics (DRO)		<49.9	49.9	<49.9	49.9	<50.0	50.0				
Motor Oil Range Hydrocarbons (MRO)		<49.9	49.9	<49.9	49.9	<50.0	50.0				
Total TPH		<49.90	49.90	<49.90	49.90	<50.00	50.00				

BRL - Below Reporting Limit

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

Jessica Kramer

eurofins | Environment Testing Xenco

Analytical Report 677958

for

Terracon-Lubbock

Project Manager: Joseph Guesnier

Skelly 704

AR197355

11.19.2020

Collected By: Client

6701 Aberdeen, Suite 9 Lubbock, TX 79424

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-23)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)

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11.19.2020

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

Reference: Eurofins Xenco, LLC Report No(s): **677958**
Skelly 704
Project Address:

Joseph Guesnier:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 677958. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 677958 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Manager

A Small Business and Minority Company

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

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Sample Cross Reference 677958

Terracon-Lubbock, Lubbock, TX

Skelly 704

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
CS-6 (0-0.5)	S	11.10.2020 13:00	0 - 0.5	677958-001
CS-6 (0.5-1)	S	11.10.2020 13:05	0.5 - 1	677958-002
CS-6 (1.5-2)	S	11.10.2020 13:10	1.5 - 2	677958-003

CASE NARRATIVE

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Client Name: Terracon-Lubbock

Project Name: Skelly 704

Project ID: *AR197355*
Work Order Number(s): *677958*

Report Date: *11.19.2020*
Date Received: *11.13.2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3142724 BTEX by EPA 8021B

Lab Sample ID 677958-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Benzene, Ethylbenzene, Toluene, o-Xylene recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate. m,p-Xylenes recovered above QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 677958-001, -002, -003.
The Laboratory Control Sample for Toluene, m,p-Xylenes , Benzene, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3142734 TPH by SW8015 Mod

Surrogate 1-Chlorooctane recovered below QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 677958-002.

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Certificate of Analytical Results 677958

Terracon-Lubbock, Lubbock, TX

Skelly 704

Sample Id: **CS-6 (0-0.5)** Matrix: Soil Date Received:11.13.2020 16:50

Lab Sample Id: 677958-001 Date Collected: 11.10.2020 13:00 Sample Depth: 0 - 0.5

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 11.18.2020 15:10 % Moisture:

Seq Number: 3142682 Basis: Wet Weight

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8.39**	5.00	mg/kg	11.18.2020 20:31		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 11.18.2020 17:00 % Moisture:

Seq Number: 3142734 Basis: Wet Weight

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	11.19.2020 03:30	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	11.19.2020 03:30	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	11.19.2020 03:30	U	1
Total TPH	PHC635	<49.90	49.90	mg/kg	11.19.2020 03:30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	70	%	70-130	11.19.2020 03:30	
o-Terphenyl	84-15-1	79	%	70-130	11.19.2020 03:30	

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Certificate of Analytical Results 677958

Terracon-Lubbock, Lubbock, TX

Skelly 704

Sample Id:	**CS-6 (0-0.5)**	Matrix:	Soil	Date Received:	11.13.2020 16:50
Lab Sample Id:	677958-001	Date Collected:	11.10.2020 13:00	Sample Depth:	0 - 0.5
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MNR				
Analyst:	MNR	Date Prep:	11.18.2020 15:00	% Moisture:	
Seq Number:	3142724			Basis:	Wet Weight
				SUB:	T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	11.19.2020 03:54	UX	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	11.19.2020 03:54	UX	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	11.19.2020 03:54	UX	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	11.19.2020 03:54	UX	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	11.19.2020 03:54	UX	1
Xylenes, Total	1330-20-7	<0.002000	0.002000	mg/kg	11.19.2020 03:54	U	1
Total BTEX		<0.002000	0.002000	mg/kg	11.19.2020 03:54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	85	%	70-130	11.19.2020 03:54	
4-Bromofluorobenzene	460-00-4	93	%	70-130	11.19.2020 03:54	

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Certificate of Analytical Results 677958

Terracon-Lubbock, Lubbock, TX

Skelly 704

Sample Id: **CS-6 (0.5-1)** Matrix: Soil Date Received:11.13.2020 16:50

Lab Sample Id: 677958-002 Date Collected: 11.10.2020 13:05 Sample Depth: 0.5 - 1

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 11.18.2020 15:10 % Moisture:

Seq Number: 3142682 Basis: Wet Weight

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**11.5**	4.96	mg/kg	11.18.2020 20:38		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 11.18.2020 17:00 % Moisture:

Seq Number: 3142734 Basis: Wet Weight

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	11.19.2020 04:30	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	11.19.2020 04:30	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	11.19.2020 04:30	U	1
Total TPH	PHC635	<49.90	49.90	mg/kg	11.19.2020 04:30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	68	%	70-130	11.19.2020 04:30	**
o-Terphenyl	84-15-1	77	%	70-130	11.19.2020 04:30	

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Certificate of Analytical Results 677958

Terracon-Lubbock, Lubbock, TX

Skelly 704

Sample Id:	**CS-6 (0.5-1)**	Matrix:	Soil	Date Received:	11.13.2020 16:50
Lab Sample Id:	677958-002	Date Collected:	11.10.2020 13:05	Sample Depth:	0.5 - 1
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MNR				
Analyst:	MNR	Date Prep:	11.18.2020 15:00	% Moisture:	
Seq Number:	3142724			Basis:	Wet Weight
				SUB:	T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.00305**	0.00200	mg/kg	11.19.2020 10:24		1
Toluene	108-88-3	**0.00283**	0.00200	mg/kg	11.19.2020 10:24		1
Ethylbenzene	100-41-4	**0.00443**	0.00200	mg/kg	11.19.2020 10:24		1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	11.19.2020 10:24	U	1
o-Xylene	95-47-6	**0.00302**	0.00200	mg/kg	11.19.2020 10:24		1
Xylenes, Total	1330-20-7	**0.003020**	0.002000	mg/kg	11.19.2020 10:24		1
Total BTEX		**0.01333**	0.002000	mg/kg	11.19.2020 10:24		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	114	%	70-130	11.19.2020 10:24	
4-Bromofluorobenzene	460-00-4	117	%	70-130	11.19.2020 10:24	

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Certificate of Analytical Results 677958

Terracon-Lubbock, Lubbock, TX

Skelly 704

Sample Id:	**CS-6 (1.5-2)**	Matrix:	Soil	Date Received:	11.13.2020 16:50
Lab Sample Id:	677958-003	Date Collected:	11.10.2020 13:10	Sample Depth:	1.5 - 2

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

Tech: CHE
Analyst: CHE
Seq Number: 3142682

Date Prep: 11.18.2020 15:10

% Moisture:
Basis: Wet Weight
SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	11.18.2020 20:45	U	1

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P

Tech: DVM
Analyst: ARM
Seq Number: 3142734

Date Prep: 11.18.2020 17:00

% Moisture:
Basis: Wet Weight
SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	11.19.2020 04:50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	11.19.2020 04:50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	11.19.2020 04:50	U	1
Total TPH	PHC635	<50.00	50.00	mg/kg	11.19.2020 04:50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	73	%	70-130	11.19.2020 04:50	
o-Terphenyl	84-15-1	82	%	70-130	11.19.2020 04:50	

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Certificate of Analytical Results 677958

Terracon-Lubbock, Lubbock, TX

Skelly 704

Sample Id:	**CS-6 (1.5-2)**	Matrix:	Soil	Date Received:	11.13.2020 16:50
Lab Sample Id:	677958-003	Date Collected:	11.10.2020 13:10	Sample Depth:	1.5 - 2
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MNR				
Analyst:	MNR	Date Prep:	11.18.2020 15:00	% Moisture:	
Seq Number:	3142724			Basis:	Wet Weight
				SUB:	T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	11.19.2020 10:50	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	11.19.2020 10:50	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	11.19.2020 10:50	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	11.19.2020 10:50	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	11.19.2020 10:50	U	1
Xylenes, Total	1330-20-7	<0.002000	0.002000	mg/kg	11.19.2020 10:50	U	1
Total BTEX		<0.002000	0.002000	mg/kg	11.19.2020 10:50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	119	%	70-130	11.19.2020 10:50	
1,4-Difluorobenzene	540-36-3	99	%	70-130	11.19.2020 10:50	

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Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

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QC Summary 677958

Terracon-Lubbock

Skelly 704

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3142682 — Matrix: Solid — Date Prep: 11.18.2020
MB Sample Id: 7715463-1-BLK — LCS Sample Id: 7715463-1-BKS — LCSD Sample Id: 7715463-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	265	106	265	106	90-110	0	20	mg/kg	11.18.2020 18:55	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3142682 — Matrix: Soil — Date Prep: 11.18.2020
Parent Sample Id: 678169-001 — MS Sample Id: 678169-001 S — MSD Sample Id: 678169-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	58.5	251	317	103	314	102	90-110	1	20	mg/kg	11.18.2020 21:00	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3142682 — Matrix: Soil — Date Prep: 11.18.2020
Parent Sample Id: 678242-013 — MS Sample Id: 678242-013 S — MSD Sample Id: 678242-013 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<4.98	249	297	119	282	113	90-110	5	20	mg/kg	11.18.2020 19:17	X

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3142734 — Matrix: Solid — Date Prep: 11.18.2020
MB Sample Id: 7715501-1-BLK — LCS Sample Id: 7715501-1-BKS — LCSD Sample Id: 7715501-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1030	103	993	99	70-130	4	20	mg/kg	11.19.2020 02:51	
Diesel Range Organics (DRO)	<50.0	1000	1000	100	994	99	70-130	1	20	mg/kg	11.19.2020 02:51	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	97		109		101		70-130	%	11.19.2020 02:51
o-Terphenyl	119		101		95		70-130	%	11.19.2020 02:51

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3142734 — Matrix: Solid — Date Prep: 11.18.2020
MB Sample Id: 7715501-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	11.19.2020 02:31	

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

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

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

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QC Summary 677958

Terracon-Lubbock

Skelly 704

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3142734 Matrix: Soil Date Prep: 11.18.2020
Parent Sample Id: 677958-001 MS Sample Id: 677958-001 S MSD Sample Id: 677958-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	999	941	94	918	92	70-130	2	20	mg/kg	11.19.2020 03:50	
Diesel Range Organics (DRO)	<50.0	999	973	97	984	99	70-130	1	20	mg/kg	11.19.2020 03:50	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	88		92		70-130	%	11.19.2020 03:50
o-Terphenyl	73		71		70-130	%	11.19.2020 03:50

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3142724 Matrix: Solid Date Prep: 11.18.2020
MB Sample Id: 7715511-1-BLK LCS Sample Id: 7715511-1-BKS LCSD Sample Id: 7715511-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.108	108	0.107	107	70-130	1	35	mg/kg	11.19.2020 00:54	
Toluene	<0.00200	0.100	0.112	112	0.108	108	70-130	4	35	mg/kg	11.19.2020 00:54	
Ethylbenzene	<0.00200	0.100	0.114	114	0.111	111	70-130	3	35	mg/kg	11.19.2020 00:54	
m,p-Xylenes	<0.00400	0.200	0.225	113	0.219	110	70-130	3	35	mg/kg	11.19.2020 00:54	
o-Xylene	<0.00200	0.100	0.112	112	0.109	109	70-130	3	35	mg/kg	11.19.2020 00:54	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	91		102		104		70-130	%	11.19.2020 00:54
4-Bromofluorobenzene	123		103		104		70-130	%	11.19.2020 00:54

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3142724 Matrix: Soil Date Prep: 11.18.2020
Parent Sample Id: 677958-001 MS Sample Id: 677958-001 S MSD Sample Id: 677958-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.139	139	0.160	160	70-130	14	35	mg/kg	11.19.2020 01:46	X
Toluene	<0.00200	0.0998	0.137	137	0.153	153	70-130	11	35	mg/kg	11.19.2020 01:46	X
Ethylbenzene	<0.00200	0.0998	0.135	135	0.147	147	70-130	9	35	mg/kg	11.19.2020 01:46	X
m,p-Xylenes	<0.00399	0.200	0.260	130	0.287	144	70-130	10	35	mg/kg	11.19.2020 01:46	X
o-Xylene	<0.00200	0.0998	0.138	138	0.147	147	70-130	6	35	mg/kg	11.19.2020 01:46	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		102		70-130	%	11.19.2020 01:46
4-Bromofluorobenzene	107		105		70-130	%	11.19.2020 01:46

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

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

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

677958

CHAIN OF CUSTODY RECORD

Terracon

Laboratory: Xenco
Address: 6701 Aberdeen
Lubbock, Texas 79424

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

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE:

TEMP OF COOLER WHEN RECEIVED (°C)

Page 1 of 1

Project Number: AR197355
Project Name: Skelly 704

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 4 oz Glass	40 ml VOA	60 ml VOA	5035 kit	Chloride (EPA Method 300)	BTEX (EPA Method 8021B)	TPH Extended 8015	Hold	Lab Sample ID
S	11/10/2020	13:00	X		CS-6 (0-0.5)	0	0.5	X				X	X	X		677958-001
S	11/10/2020	13:05	X		CS-6 (0.5-1)	0.5	1	X				X	X	X		-002
S	11/10/2020	13:10	X		CS-6 (1.5-2)	1.5	2	X				X	X	X		-003

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

TRRP Laboratory Review Checklist ☐ Yes ☐ No

Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
	11-13-20	4:50		11/13/2020	16:50

NOTES: Client: Spur Energy Partners LLC

e-mail results to: 1.3/1.27

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

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

Inter-Office Shipment

IOS Number : 73375

Date/Time: 11.16.2020
Created by: Michael J Turner
Please send report to: Jessica Kramer

Lab# From: **Lubbock**
Delivery Priority:
Address: 6701 Aberdeen, Suite 9 Lubbock, TX 79424

Lab# To: **Midland**
Air Bill No.:
E-Mail: jessica.kramer@eurofinset.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
677958-001	S	CS-6 (0-0.5)	11.10.2020 13:00	SW8021B	BTEX by EPA 8021B	11.19.2020	11.24.2020	JKR	BR4FBZ BZ BZME EBZ	
677958-001	S	CS-6 (0-0.5)	11.10.2020 13:00	SW8015MOD_NM	TPH by SW8015 Mod	11.19.2020	11.24.2020	JKR	PHCC10C28 PHCC28C3	
677958-001	S	CS-6 (0-0.5)	11.10.2020 13:00	E300_CL	Chloride by EPA 300	11.19.2020	12.08.2020	JKR	CL	
677958-002	S	CS-6 (0.5-1)	11.10.2020 13:05	SW8015MOD_NM	TPH by SW8015 Mod	11.19.2020	11.24.2020	JKR	PHCC10C28 PHCC28C3	
677958-002	S	CS-6 (0.5-1)	11.10.2020 13:05	SW8021B	BTEX by EPA 8021B	11.19.2020	11.24.2020	JKR	BR4FBZ BZ BZME EBZ	
677958-002	S	CS-6 (0.5-1)	11.10.2020 13:05	E300_CL	Chloride by EPA 300	11.19.2020	12.08.2020	JKR	CL	
677958-003	S	CS-6 (1.5-2)	11.10.2020 13:10	SW8015MOD_NM	TPH by SW8015 Mod	11.19.2020	11.24.2020	JKR	PHCC10C28 PHCC28C3	
677958-003	S	CS-6 (1.5-2)	11.10.2020 13:10	SW8021B	BTEX by EPA 8021B	11.19.2020	11.24.2020	JKR	BR4FBZ BZ BZME EBZ	
677958-003	S	CS-6 (1.5-2)	11.10.2020 13:10	E300_CL	Chloride by EPA 300	11.19.2020	12.08.2020	JKR	CL	

Inter Office Shipment or Sample Comments:

Relinquished By: Michael J Turner

Date Relinquished: 11.16.2020

Received By: Jessica Kramer

Date Received: 11.17.2020

Cooler Temperature: 2.6

Eurofins Xenco, LLC

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 73375

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

Sent By: Michael J Turner **Date Sent:** 11.16.2020 09.41 AM

Received By: Jessica Kramer **Date Received:** 11.17.2020 11.51 AM

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	2.6	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received with appropriate temperature?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**	
#5 *Custody Seals Signed and dated for Containers/coolers	**Yes**	
#6 *IOS present?	**Yes**	
#7 Any missing/extra samples?	**No**	
#8 IOS agrees with sample label(s)/matrix?	**Yes**	
#9 Sample matrix/ properties agree with IOS?	**Yes**	
#10 Samples in proper container/ bottle?	**Yes**	
#11 Samples properly preserved?	**Yes**	
#12 Sample container(s) intact?	**Yes**	
#13 Sufficient sample amount for indicated test(s)?	**Yes**	
#14 All samples received within hold time?	**Yes**	

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

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

Checklist reviewed by: Jessica Kramer Date: 11.17.2020

Jessica Kramer

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Terracon-Lubbock

Date/ Time Received: 11.13.2020 04.50.00 PM

Work Order #: 677958

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

Temperature Measuring device used : IR-4

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	1.3	
#2 *Shipping container in good condition?	**N/A**	
#3 *Samples received on ice?	**No**	
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**	
#5 Custody Seals intact on sample bottles?	**N/A**	
#6*Custody Seals Signed and dated?	**N/A**	
#7 *Chain of Custody present?	**Yes**	
#8 Any missing/extra samples?	**No**	
#9 Chain of Custody signed when relinquished/ received?	**Yes**	
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**	
#11 Container label(s) legible and intact?	**Yes**	
#12 Samples in proper container/ bottle?	**Yes**	
#13 Samples properly preserved?	**Yes**	
#14 Sample container(s) intact?	**Yes**	
#15 Sufficient sample amount for indicated test(s)?	**Yes**	
#16 All samples received within hold time?	**Yes**	
#17 Subcontract of sample(s)?	**Yes**	Xenco Midland
#18 Water VOC samples have zero headspace?	**N/A**	

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

Analyst: PH Device/Lot#:

Checklist completed by: Michael J Turner Date: 11.16.2020

Checklist reviewed by: Jessica Kramer Date: 11.16.2020

APPENDIX E

Standard of Care, Limitations, and Reliance Policies

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 (PAR197123).

Additional Scope Limitations

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

Reliance

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

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

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

CONDITIONS

Operator:	OGRID:
Spur Energy Partners LLC 9655 Katy Freeway Houston, TX 77024	328947
	Action Number: 24758
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
chensley	None	6/10/2021