Form C-141
Page 6

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Closure

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

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

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

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

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

☐ Description of remediation activities

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

Printed Name: _____ Title: _____

Signature: Katherine Purvis Date: _____

email: _____ Telephone: _____

OCD Only

Received by: Jocelyn Harimon Date: 02/13/2023

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: Robert Hamlet Date: 6/13/2023

Printed Name: Robert Hamlet Title: Environmental Specialist - Advanced

Incident ID	
District RP	
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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?	_____ (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.

State of New Mexico
Oil Conservation Division

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Printed Name: _____ Title: _____

Signature: Katherine Purvis Date: _____

email: _____ Telephone: _____

OCD Only

Received by: Jocelyn Harimon Date: 02/13/2023

State of New Mexico
Oil Conservation Division

Incident ID	
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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.

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Printed Name: _____ Title: _____

Signature: Katherine Purvis Date: _____

email: _____ Telephone: _____

OCD Only

Received by: Jocelyn Harimon Date: 02/13/2023

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

Signature: _____ Date: _____

Incident ID	
District RP	
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Closure

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

☐ Description of remediation activities

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Printed Name: _____ Title: _____

Signature: Katherine Purvis Date: _____

email: _____ Telephone: _____

OCD Only

Received by: Jocelyn Harimon Date: 02/13/2023

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

SPUR ENERGY PARTNERS

Terracon Consulting Engineers & Scientists

Remediation Summary Closure Report

Date of report:		3/11/2021	Incident #	nRM2013931703
Site Name:		BKU 33 flowline	Subgroup:	Storage
Site GPS:	Latitude	32.833600	County:	Eddy, NM
	Longitude	-104.022600°	Terracon Job #	AR207091

Incident Details

Date of Release: 5/10/2020

Cause of Release: Leak from the BKU 33 flowline, just before it comes into the Western Federal Battery. Hole in the bottom of a steel 2" flowline. 0.5 bbls of oil and 0.5 bbls of water spilled.

	Released	Recovered	Net Loss
Crude Oil	0.5 Barrels	0 Barrels	0.5 Barrels
Produced Water	0.5 Barrels	0 Barrels	0.5 Barrels
Dimensions:	L: 20'	W: 30'	D: 2'
Total square feet:	600		
Total cubic yards	45		

Agency Notification	Yes	No
Courtesy Call	☒	☐
Reportable Release	☐	☒
Internal Report Only	☒	☐
C-141 Filed	☒	☐
OCD Incident# NA	District: Artesia	

Impacted Area: Approx. 600 sq. ft. area impacting the pasture 100 feet north of the BKU 33 well pad.

Sampling Activities

Sampling Date: 5/11/2020, 7/30/2020, 8/25/2020

Field Observations: During the initial release assessment, an area measuring approximately 600 sq. ft. exhibited evidence of moderate hydrocarbon staining.

Sampling Event	Collected	Type
Initial	5	Grab
Confirmation	2	Composite
Stockpile	-	-
Delineation	-	-

Laboratory: Xenco Laboratories, Lubbock, Texas

Analysis: Chloride (EPA Method 300), BTEX (EPA Method 8021B), TPH (EPA Method 8015)

Remediation Activities

May 11, 2020 During the initial release assessment conducted by Terracon, five soil samples were collected from the affected area and submitted to the laboratory for analysis of chloride. Laboratory analytical results indicated soil sample HA-1 (0-0.5) exhibited a chloride concentration of 9,130 mg/kg and HA-1 (3.5-4) exhibited chloride concentration of 677 mg/kg; exceeding the NMOCD Remediation Action Levels of 600 mg/kg for chloride, but Total Petroleum Hydrocarbons (TPH) results indicated HA-1 (0-0.5) had a concentration level of 6,680 mg/kg and HA-1 (3.5-4) exhibited a TPH concentrations of 675 mg/kg.

August 17, 2021 After receiving and interpreting the lab analysis, Terracon determined that this release could be successfully remediated by the removal of impacted materials and disposal of those materials at a permitted disposal facility.

August 25, 2021 Terracon returned to the location to conduct the remedial actions and collect confirmation samples. Approximately 80 cubic yards of impacted material was excavated and disposed of at the Lea Land landfill. Two five-point composite samples were collected

from the impacted area and submitted to the laboratory for analysis of chloride. Laboratory analytical results indicated the soil samples collected exhibited chloride concentrations of less than the NMOCD Remediation Action Levels for chloride and Total TPH.

Conclusions

Laboratory analytical results from the soil samples collected during the initial release assessment indicated chloride exceeded RRC recommended Action Levels in one of the submitted soil samples. After remediation activities, laboratory results for the confirmation samples indicated neither Total TPH, or chloride concentrations exceeded NMOCDE Remediation Action Levels for either constituent.

Recommendations

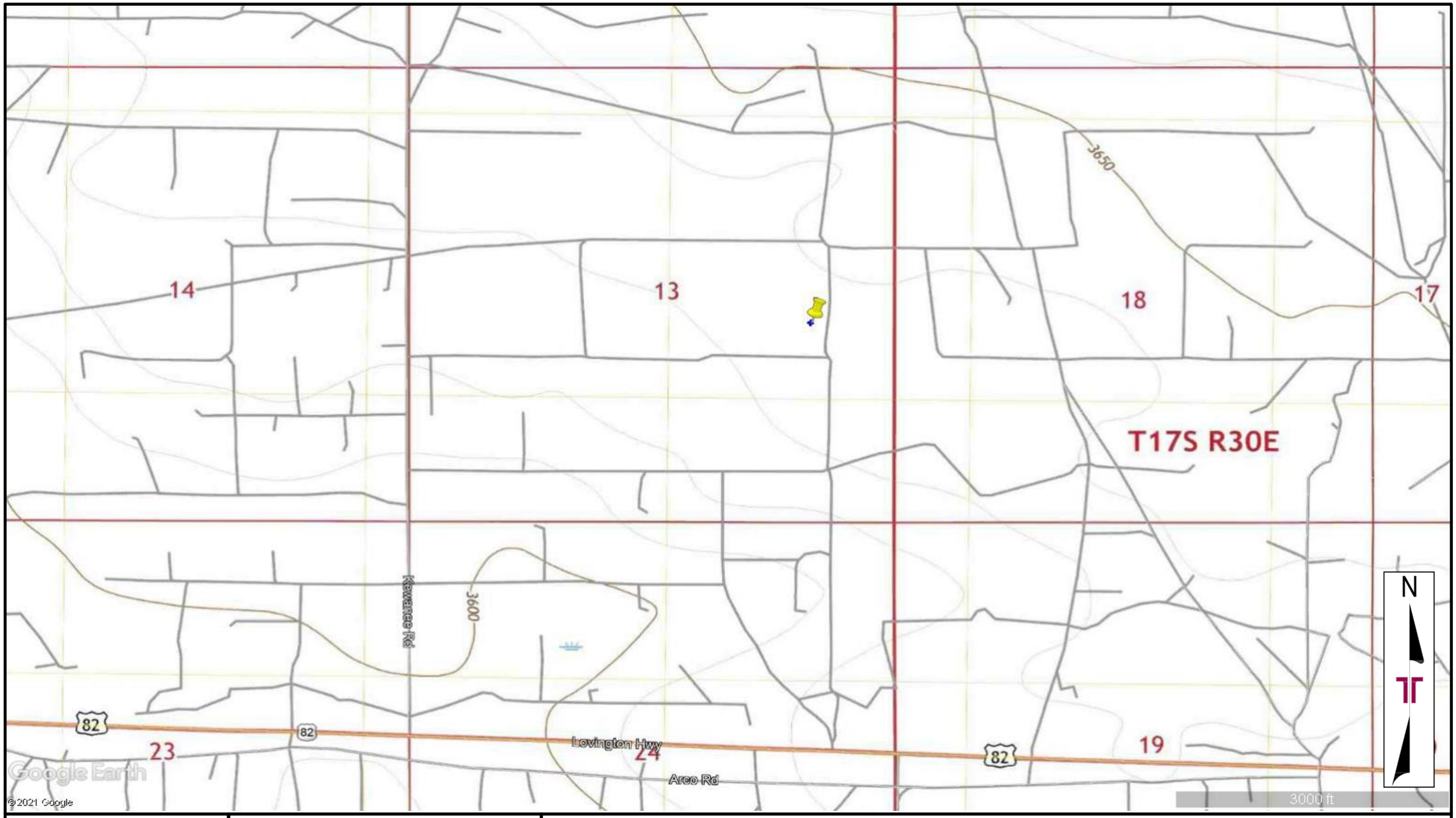
Based on field activities and the review of laboratory analytical results from the confirmation soil samples, the site has been sufficiently remediated and additional remediation and/or investigation is not warranted in association with the May 10, 2020 release at the BKU 33 flowline Release location.

Please contact either of the undersigned at (806) 300-0140 if you have any questions regarding this project.

Joseph Guesnier
Staff Scientist

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

Attached:
Figure 1 – Topographic Map
Figure 2 – Site Map
Figure 3 – Confirmation Map
Table 1 – Soil Sample Analytical Results
Photographic Log
Laboratory Analytical Report

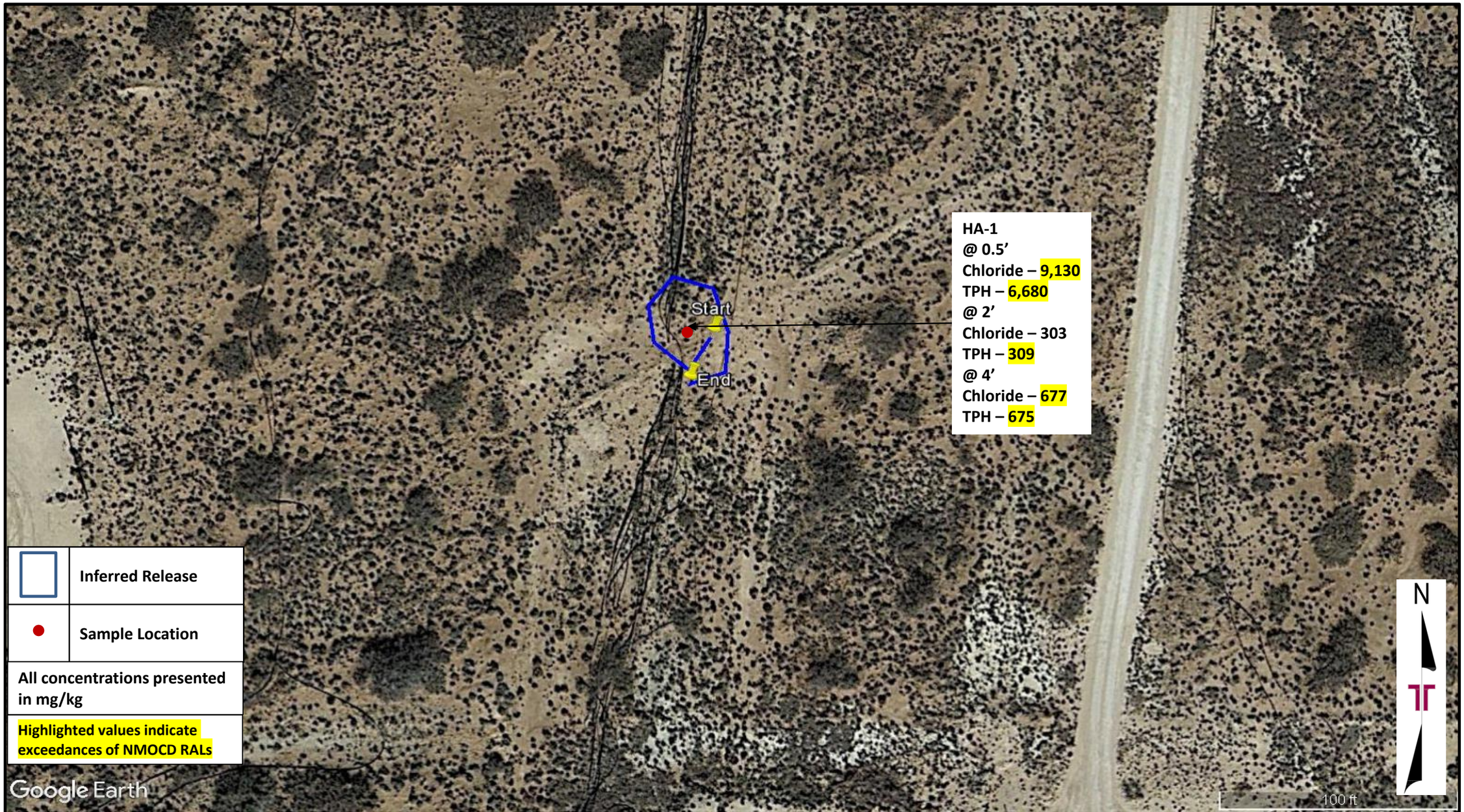


Project No.	AR207091
Scale:	As Shown
Source:	USGS
Date:	2014

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

Figure 1 – Topographic Map

BKU 33 FL Leak
32.833600°, -104.022600°
Eddy County, New Mexico



Project No.	AR207091
Scale:	As Shown
Source:	Google Earth
Date:	2018

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

Figure 2 – Site Map

BKU 33 FL Leak
32.833600°, -104.022600°
Eddy County, New Mexico

Project No.	AR207091
Scale:	As Shown
Source:	Google Earth
Date:	2018

Terracon
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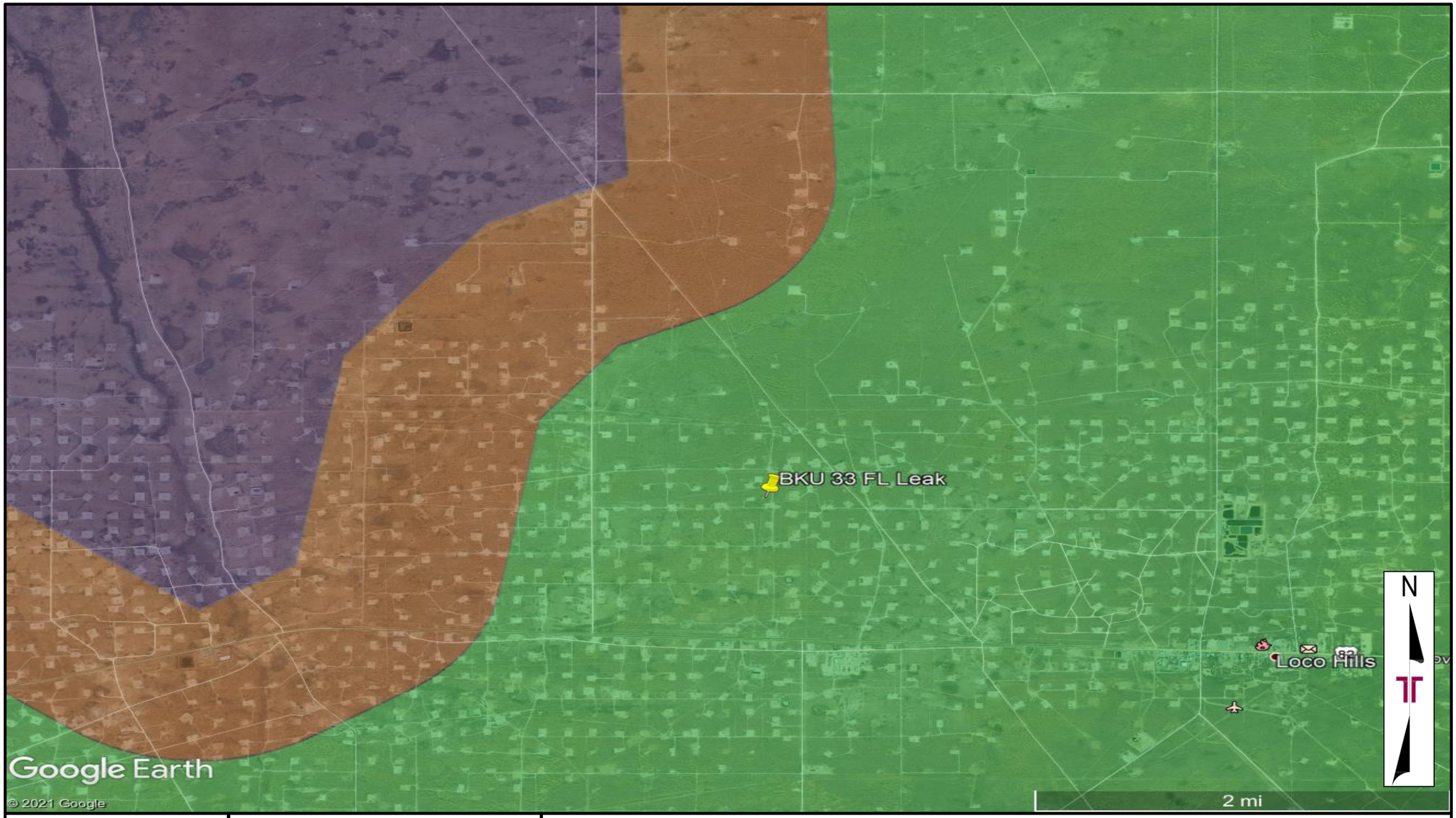
Figure 3 – Confirmation Map

BKU 33 FL Leak
32.833600°, -104.022600°
Eddy County, New Mexico



Project No.	AR207091
Scale:	As Shown
Source:	USGS
Date:	2014

Terracon
Consulting Engineers & Scientists
5847 50th St. Lubbock, Texas 79424
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Figure 4 – Cave Karst Public UCP Map

BKU 33 FL Leak
32.833600°, -104.022600°
Eddy County, New Mexico

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS - BTEX[1], Chloride[2], and TPH[3]
BKU 33 FL Leak
Terracon Project No. AR207091

Sample I.D.	Sample Depth (bgs)	Sample Type	Sample Date	BTEX (mg/kg)	Chloride (mg/kg)	TPH (8015M) (mg/kg)			
						GRO	DRO	MRO	TOTAL
Release Margin Samples									
HA-1 (0-0.5)	0 - 0.5'	Grab	05/14/20	Benzene - <0.0430 Toluene - 0.314 Ethylbenzene - 1.12 Total Xylenes - 1.93 Total BTEX - 3.37	**9,130**	328	5,710 D	639	**6,680**
HA-1 (1.5-2)	1.5 - 2'	Grab	05/14/20	Benzene - <0.00829 Toluene - <0.00429 Ethylbenzene - 0.0165 J Total Xylenes - 0.0202 Total BTEX - 0.0367	303	18.2 J	245	45.8 J	**309**
HA-1 (3.5-4)	3.5-4'	Grab	05/14/20	Benzene - <0.0173 Toluene - 0.0649 Ethylbenzene - 0.0763 Total Xylenes - 0.18 Total BTEX - 0.321	**677**	23.8 J	561	89.8	**675**
Confirmation Samples									
W-(1.5-2)	1.5-2'	Composite	05/14/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	489	ND	ND	ND	ND
F-(3.5-4)	3.5-4'	Composite	05/14/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	508	ND	ND	ND	ND
New Mexico Oil Conservation Division (NMOCD) Remediation and Delineation Standards*				**Benzene - 10** **Toluene - N/A** **Ethylbenzene - N/A** **Total Xylenes - N/A** **Total BTEX - 50**	**600**	**N/A**			**100**

1. BTEX = Benzene, toluene, ethylbenzene, total xylenes analyzed by EPA Method 8021B
2. Chloride = Chloride analyzed by EPA Method 300.
3. TPH = Total petroleum hydrocarbons analyzed by EPA Method 8015M (GRO/DRO/ORO)
* = NMOCD Remediation and Delineation Standards are proposed in 19.15.29.12 NMAC - N, 8/14/2018
< = Constituent not detected above the indicated laboratory SDL
NA = Not Analyzed
ND= Non Detect
Bold denotes concentrations that exceed the New Mexico Oil Conservation Division (NMOCD) Remediation and Delineation Standards.

Photographic Log

PHOTO 1: View of inferred area of impact, facing south. 5/11/2020

PHOTO 2: View of inferred area of impact, facing north. 5/11/2020

PHOTO 3: View of remediation, facing northwest. 08/25/2020

PHOTO 4: View of remediation, facing southwest. 08/25/2020

Certificate of Analysis Summary 661930

Terracon-Lubbock, Lubbock, TX

Project Name: BKU 33 FL Leak

Project Id: AR207091
Contact: Joseph Guesnier
Project Location: Client: Spur Energy Partners

Date Received in Lab: Mon 05.18.2020 14:10
Report Date: 06.01.2020 13:50
Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	661930-001		661930-003		661930-004					
	Field Id:	HA-1 (0-0.5)		HA-1 (1.5-2)		HA-1 (3.5-4)					
	Depth:	0-0.5 ft		1.5-2 ft		3.5-4 ft					
	Matrix:	SOIL		SOIL		SOIL					
	Sampled:	05.14.2020 16:23		05.14.2020 16:27		05.14.2020 16:29					
BTEX by EPA 8021B	***Extracted:***	05.19.2020 12:00		05.19.2020 12:00		05.19.2020 12:00					
	Analyzed:	05.20.2020 15:43		05.20.2020 13:42		05.20.2020 16:07					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.0430	0.0951	<0.00829	0.0183	<0.0173	0.0382				
Toluene		0.314	0.0951	<0.00429	0.0183	0.0649	0.0382				
Ethylbenzene		1.12	0.0951	0.0165 J	0.0183	0.0763	0.0382				
m,p-Xylenes		1.24	0.190	0.0202 J	0.0367	0.115	0.0763				
o-Xylene		0.694	0.0951	<0.00626	0.0183	0.0649	0.0382				
Total Xylenes		1.93	0.0951	0.0202	0.0183	0.180	0.0382				
Total BTEX		3.37	0.0951	0.0367	0.0183	0.321	0.0382				
Chloride by EPA 300 **SUB: T104704215-19-30**	***Extracted:***	05.20.2020 16:52		05.20.2020 16:52		05.20.2020 16:52					
	Analyzed:	05.20.2020 23:14		05.20.2020 23:26		05.20.2020 23:38					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		9130	100	303	9.96	677	9.94				
TPH By SW8015 Mod **SUB: T104704215-19-30**	***Extracted:***	05.28.2020 12:57		05.28.2020 13:00		05.28.2020 13:03					
	Analyzed:	05.31.2020 15:00		05.29.2020 16:54		05.29.2020 17:14					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		328	49.7	18.2 J	49.8	23.8 J	49.8				
Diesel Range Organics (DRO)		5710 D	99.4	245	49.8	561	49.8				
Motor Oil Range Hydrocarbons (MRO)		639	49.7	45.8 J	49.8	89.8	49.8				
Total TPH		6680	49.7	309	49.8	675	49.8				

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

Jessica Kramer
Project Manager

Analytical Report 661930

for

Terracon-Lubbock

Project Manager: Joseph Guesnier

BKU 33 FL Leak

AR207091

06.01.2020

Collected By: Client

6701 Aberdeen, Suite 9 Lubbock, TX 79424

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-32), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-23), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
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 (T104704534-20-6)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

06.01.2020

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

Reference: XENCO Report No(s): **661930**
BKU 33 FL Leak
Project Address: Client: Spur Energy Partners

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) 661930. 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. 661930 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 Manager

A Small Business and Minority Company

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

Sample Cross Reference 661930

Terracon-Lubbock, Lubbock, TX

BKU 33 FL Leak

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
HA-1 (0-0.5)	S	05.14.2020 16:23	0 - 0.5 ft	661930-001
HA-1 (1.5-2)	S	05.14.2020 16:27	1.5 - 2 ft	661930-003
HA-1 (3.5-4)	S	05.14.2020 16:29	3.5 - 4 ft	661930-004
HA-1 (0.5-1)	S	05.14.2020 16:25	0.5 - 1 ft	Not Analyzed
HA-1 (4-5-5)	S	05.14.2020 16:31	4.5 - 5 ft	Not Analyzed

CASE NARRATIVE

Client Name: Terracon-Lubbock

Project Name: BKU 33 FL Leak

Project ID: *AR207091*
Work Order Number(s): *661930*

Report Date: *06.01.2020*
Date Received: *05.18.2020*

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-3126757 BTEX by EPA 8021B
Samples 661930-001 and -004 were diluted due to hydrocarbons beyond xylenes.

Batch: LBA-3127457 TPH By SW8015 Mod
Surrogate o-Terphenyl recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 661930-001.

Certificate of Analytical Results 661930

Terracon-Lubbock, Lubbock, TX

BKU 33 FL Leak

Sample Id:	**HA-1 (0-0.5)**	Matrix:	Soil	Date Received:	05.18.2020 14:10
Lab Sample Id:	661930-001	Date Collected:	05.14.2020 16:23	Sample Depth:	0 - 0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	05.20.2020 16:52	Basis:	Wet Weight
Seq Number:	3126586			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**9130**	100	3.55	mg/kg	05.20.2020 23:14		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	SW8015P
Tech:	DRU			% Moisture:	
Analyst:	ISU	Date Prep:	05.28.2020 12:57	Basis:	Wet Weight
Seq Number:	3127457			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**328**	49.7	9.94	mg/kg	05.31.2020 15:00		1
Diesel Range Organics (DRO)	C10C28DRO	**5710**	99.4	19.9	mg/kg	05.31.2020 15:20	D	2
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**639**	49.7	9.94	mg/kg	05.31.2020 15:00		1
Total TPH	PHC635	**6680**	49.7	9.94	mg/kg	05.31.2020 15:20		2

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	122	%	70-135	05.31.2020 15:00	
o-Terphenyl	84-15-1	197	%	70-135	05.31.2020 15:00	**

Certificate of Analytical Results 661930

Terracon-Lubbock, Lubbock, TX

BKU 33 FL Leak

Sample Id:	**HA-1 (0-0.5)**	Matrix:	Soil	Date Received:	05.18.2020 14:10
Lab Sample Id:	661930-001	Date Collected:	05.14.2020 16:23	Sample Depth:	0 - 0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	05.19.2020 12:00	Basis:	Wet Weight
Seq Number:	3126757				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0430	0.0951	0.0430	mg/kg	05.20.2020 15:43	U	5
Toluene	108-88-3	**0.314**	0.0951	0.0222	mg/kg	05.20.2020 15:43		5
Ethylbenzene	100-41-4	**1.12**	0.0951	0.0293	mg/kg	05.20.2020 15:43		5
m,p-Xylenes	179601-23-1	**1.24**	0.190	0.0324	mg/kg	05.20.2020 15:43		5
o-Xylene	95-47-6	**0.694**	0.0951	0.0324	mg/kg	05.20.2020 15:43		5
Total Xylenes	1330-20-7	**1.93**	0.0951	0.0324	mg/kg	05.20.2020 15:43		5
Total BTEX		**3.37**	0.0951	0.0222	mg/kg	05.20.2020 15:43		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	109	%	68-120	05.20.2020 15:43	
a,a,a-Trifluorotoluene	98-08-8	100	%	71-121	05.20.2020 15:43	

Certificate of Analytical Results 661930

Terracon-Lubbock, Lubbock, TX

BKU 33 FL Leak

Sample Id:	**HA-1 (1.5-2)**	Matrix:	Soil	Date Received:	05.18.2020 14:10
Lab Sample Id:	661930-003	Date Collected:	05.14.2020 16:27	Sample Depth:	1.5 - 2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	05.20.2020 16:52	Basis:	Wet Weight
Seq Number:	3126586			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**303**	9.96	0.353	mg/kg	05.20.2020 23:26		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	SW8015P
Tech:	DRU			% Moisture:	
Analyst:	ISU	Date Prep:	05.28.2020 13:00	Basis:	Wet Weight
Seq Number:	3127457			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**18.2**	49.8	9.95	mg/kg	05.29.2020 16:54	J	1
Diesel Range Organics (DRO)	C10C28DRO	**245**	49.8	9.95	mg/kg	05.29.2020 16:54		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**45.8**	49.8	9.95	mg/kg	05.29.2020 16:54	J	1
Total TPH	PHC635	**309**	49.8	9.95	mg/kg	05.29.2020 16:54		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	05.29.2020 16:54	
o-Terphenyl	84-15-1	100	%	70-135	05.29.2020 16:54	

Certificate of Analytical Results 661930

Terracon-Lubbock, Lubbock, TX

BKU 33 FL Leak

Sample Id:	**HA-1 (1.5-2)**	Matrix:	Soil	Date Received:	05.18.2020 14:10
Lab Sample Id:	661930-003	Date Collected:	05.14.2020 16:27	Sample Depth:	1.5 - 2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	05.19.2020 12:00	Basis:	Wet Weight
Seq Number:	3126757				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00829	0.0183	0.00829	mg/kg	05.20.2020 13:42	U	1
Toluene	108-88-3	<0.00429	0.0183	0.00429	mg/kg	05.20.2020 13:42	U	1
Ethylbenzene	100-41-4	**0.0165**	0.0183	0.00565	mg/kg	05.20.2020 13:42	J	1
m,p-Xylenes	179601-23-1	**0.0202**	0.0367	0.00626	mg/kg	05.20.2020 13:42	J	1
o-Xylene	95-47-6	<0.00626	0.0183	0.00626	mg/kg	05.20.2020 13:42	U	1
Total Xylenes	1330-20-7	**0.0202**	0.0183	0.00626	mg/kg	05.20.2020 13:42		1
Total BTEX		**0.0367**	0.0183	0.00429	mg/kg	05.20.2020 13:42		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	92	%	68-120	05.20.2020 13:42	
a,a,a-Trifluorotoluene	98-08-8	108	%	71-121	05.20.2020 13:42	

Certificate of Analytical Results 661930

Terracon-Lubbock, Lubbock, TX

BKU 33 FL Leak

Sample Id:	**HA-1 (3.5-4)**	Matrix:	Soil	Date Received:	05.18.2020 14:10
Lab Sample Id:	661930-004	Date Collected:	05.14.2020 16:29	Sample Depth:	3.5 - 4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	05.20.2020 16:52	Basis:	Wet Weight
Seq Number:	3126586			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**677**	9.94	0.352	mg/kg	05.20.2020 23:38		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	SW8015P
Tech:	DRU			% Moisture:	
Analyst:	ISU	Date Prep:	05.28.2020 13:03	Basis:	Wet Weight
Seq Number:	3127457			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**23.8**	49.8	9.96	mg/kg	05.29.2020 17:14	J	1
Diesel Range Organics (DRO)	C10C28DRO	**561**	49.8	9.96	mg/kg	05.29.2020 17:14		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**89.8**	49.8	9.96	mg/kg	05.29.2020 17:14		1
Total TPH	PHC635	**675**	49.8	9.96	mg/kg	05.29.2020 17:14		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	05.29.2020 17:14	
o-Terphenyl	84-15-1	103	%	70-135	05.29.2020 17:14	

Certificate of Analytical Results 661930

Terracon-Lubbock, Lubbock, TX

BKU 33 FL Leak

Sample Id:	**HA-1 (3.5-4)**	Matrix:	Soil	Date Received:	05.18.2020 14:10
Lab Sample Id:	661930-004	Date Collected:	05.14.2020 16:29	Sample Depth:	3.5 - 4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	05.19.2020 12:00	Basis:	Wet Weight
Seq Number:	3126757				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0173	0.0382	0.0173	mg/kg	05.20.2020 16:07	U	2
Toluene	108-88-3	**0.0649**	0.0382	0.00893	mg/kg	05.20.2020 16:07		2
Ethylbenzene	100-41-4	**0.0763**	0.0382	0.0118	mg/kg	05.20.2020 16:07		2
m,p-Xylenes	179601-23-1	**0.115**	0.0763	0.0130	mg/kg	05.20.2020 16:07		2
o-Xylene	95-47-6	**0.0649**	0.0382	0.0130	mg/kg	05.20.2020 16:07		2
Total Xylenes	1330-20-7	**0.180**	0.0382	0.0130	mg/kg	05.20.2020 16:07		2
Total BTEX		**0.321**	0.0382	0.00893	mg/kg	05.20.2020 16:07		2

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	94	%	68-120	05.20.2020 16:07	
a,a,a-Trifluorotoluene	98-08-8	98	%	71-121	05.20.2020 16:07	

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 661930

Terracon-Lubbock

BKU 33 FL Leak

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3126586 — Matrix: Solid — Date Prep: 05.20.2020
MB Sample Id: 7703771-1-BLK — LCS Sample Id: 7703771-1-BKS — LCSD Sample Id: 7703771-1-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	100	100	101	101	80-120	1	20	mg/kg	05.20.2020 17:35	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3126586 — Matrix: Soil — Date Prep: 05.20.2020
Parent Sample Id: 661868-001 — MS Sample Id: 661868-001 S — MSD Sample Id: 661868-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	12.5	99.8	108	96	109	97	80-120	1	20	mg/kg	05.20.2020 18:10	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3126586 — Matrix: Soil — Date Prep: 05.20.2020
Parent Sample Id: 661868-020 — MS Sample Id: 661868-020 S — MSD Sample Id: 661868-020 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	109	100	206	97	205	96	80-120	0	20	mg/kg	05.20.2020 22:04	

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3127457 — Matrix: Solid — Date Prep: 05.28.2020
MB Sample Id: 7704261-1-BLK — LCS Sample Id: 7704261-1-BKS — LCSD Sample Id: 7704261-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<10.0	1000	909	91	997	100	70-135	9	35	mg/kg	05.28.2020 18:14	
Diesel Range Organics (DRO)	<10.0	1000	1090	109	1070	107	70-135	2	35	mg/kg	05.28.2020 18:14	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	95		109		108		70-135	%	05.28.2020 18:14
o-Terphenyl	98		111		109		70-135	%	05.28.2020 18:14

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3127457 — Matrix: Solid — Date Prep: 05.28.2020
MB Sample Id: 7704261-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<10.0	mg/kg	05.28.2020 17:54	

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

QC Summary 661930

Terracon-Lubbock

BKU 33 FL Leak

Analytical Method: **TPH By SW8015 Mod** Prep Method: SW8015P
Seq Number: 3127457 Matrix: Soil Date Prep: 05.28.2020
Parent Sample Id: 661901-003 MS Sample Id: 661901-003 S MSD Sample Id: 661901-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<10.0	1000	854	85	855	86	70-135	0	35	mg/kg	05.28.2020 19:34	
Diesel Range Organics (DRO)	15.5	1000	1010	99	997	98	70-135	1	35	mg/kg	05.28.2020 19:34	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	107		106		70-135	%	05.28.2020 19:34
o-Terphenyl	104		103		70-135	%	05.28.2020 19:34

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3126757 Matrix: Solid Date Prep: 05.19.2020
MB Sample Id: 7703669-1-BLK LCS Sample Id: 7703669-1-BKS LCSD Sample Id: 7703669-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00904	2.00	1.94	97	1.94	97	55-120	0	20	mg/kg	05.20.2020 00:30	
Toluene	<0.00468	2.00	1.99	100	1.99	100	77-120	0	20	mg/kg	05.20.2020 00:30	
Ethylbenzene	<0.00616	2.00	1.94	97	1.97	99	77-120	2	20	mg/kg	05.20.2020 00:30	
m,p-Xylenes	<0.00682	4.00	3.90	98	3.96	99	78-120	2	20	mg/kg	05.20.2020 00:30	
o-Xylene	<0.00682	2.00	1.95	98	1.98	99	78-120	2	20	mg/kg	05.20.2020 00:30	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	93		96		94		68-120	%	05.20.2020 00:30
a,a,a-Trifluorotoluene	102		100		100		71-121	%	05.20.2020 00:30

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3126757 Matrix: Soil Date Prep: 05.19.2020
Parent Sample Id: 661901-001 MS Sample Id: 661901-001 S MSD Sample Id: 661901-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.0445	1.97	1.97	100	1.92	102	54-120	3	25	mg/kg	05.20.2020 05:21	
Toluene	0.196	1.97	2.07	95	2.01	96	57-120	3	25	mg/kg	05.20.2020 05:21	
Ethylbenzene	<0.0303	1.97	1.79	91	1.75	93	58-131	2	25	mg/kg	05.20.2020 05:21	
m,p-Xylenes	0.128	3.94	3.51	86	3.44	88	62-124	2	25	mg/kg	05.20.2020 05:21	
o-Xylene	<0.0336	1.97	1.77	90	1.73	92	62-124	2	25	mg/kg	05.20.2020 05:21	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	86		85		68-120	%	05.20.2020 05:21
a,a,a-Trifluorotoluene	103		103		71-121	%	05.20.2020 05:21

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

661930

661930

Terracon

CHAIN OF CUSTODY RECORD

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

Project Number: AR207091
Project Name: BKU 33 FL Leak

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE:
TEMP OF COOLER WHEN RECEIVED (°C): 1.4-2.0 / 1.87

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	40 ml VOA	60 ml VOA	5035 kit	Chloride (EPA Method 300)	TPH Extended 8015	BTEX (EPA Method 8021B)	Hold	Lab Sample ID
S	5/14/2020	16:23		X	HA-1 (0-0.5)	0	0.5	X				X	X	X		1
S	5/14/2020	16:25		X	HA-1 (0.5-1)	0.5	1	X							X	2
S	5/14/2020	16:27		X	HA-1 (1.5-2)	1.5	2	X				X	X	X		3
S	5/14/2020	16:29		X	HA-1 (3.5-4)	3.5	4	X				X	X	X		4
S	5/14/2020	16:31		X	HA-1 (4.5-5)	4.5	5	X							X	5

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

TRRP Laboratory Review Checklist ☐ Yes ☐ No

	Date	Time		Date	Time
Relinquished by (Signature)	5-18-20	2:10	Received by (Signature)	5/18/20	14:10
Relinquished by (Signature)			Received by (Signature)		
Relinquished by (Signature)			Received by (Signature)		
Relinquished by (Signature)			Received by (Signature)		

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 : 63915

Date/Time:	05.19.2020	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.:	770502983275	E-Mail:	jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
661930-001	S	HA-1 (0-0.5)	05.14.2020 16:23	E300_CL	Chloride by EPA 300	05.25.2020	06.11.2020	JKR	CL	
661930-001	S	HA-1 (0-0.5)	05.14.2020 16:23	SW8015DRO-ORO	TPH DRO-ORO by SW-846 8015	05.25.2020	05.28.2020	JKR	PHCD	
661930-003	S	HA-1 (1.5-2)	05.14.2020 16:27	E300_CL	Chloride by EPA 300	05.25.2020	06.11.2020	JKR	CL	
661930-003	S	HA-1 (1.5-2)	05.14.2020 16:27	SW8015DRO-ORO	TPH DRO-ORO by SW-846 8015	05.25.2020	05.28.2020	JKR	PHCD	
661930-004	S	HA-1 (3.5-4)	05.14.2020 16:29	E300_CL	Chloride by EPA 300	05.25.2020	06.11.2020	JKR	CL	
661930-004	S	HA-1 (3.5-4)	05.14.2020 16:29	SW8015DRO-ORO	TPH DRO-ORO by SW-846 8015	05.25.2020	05.28.2020	JKR	PHCD	

Inter Office Shipment or Sample Comments:

Relinquished By: Brenda Ward

Brenda Ward

Date Relinquished: 05.19.2020

Received By: Jhyrom Edralin

Jhyrom Edralin

Date Received: 05.20.2020

Cooler Temperature: 3.5

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 63915

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

Sent By: Brenda Ward **Date Sent:** 05.19.2020 10.40 AM

Received By: Jhyrom Edralin **Date Received:** 05.20.2020 09.46 AM

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	3.5	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received with appropriate temperature?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**	
#5 *Custody Seals Signed and dated for Containers/coolers	**N/A**	
#6 *IOS present?	**Yes**	
#7 Any missing/extra samples?	**No**	
#8 IOS agrees with sample label(s)/matrix?	**Yes**	
#9 Sample matrix/ properties agree with IOS?	**Yes**	
#10 Samples in proper container/ bottle?	**Yes**	
#11 Samples properly preserved?	**Yes**	
#12 Sample container(s) intact?	**Yes**	
#13 Sufficient sample amount for indicated test(s)?	**Yes**	
#14 All samples received within hold time?	**Yes**	

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

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

Checklist reviewed by: _____ Date: 05.20.2020

Jhyrom Edralin

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Terracon-Lubbock

Date/ Time Received: 05.18.2020 02.10.00 PM

Work Order #: 661930

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)?	1.9	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**	
#5 Custody Seals intact on sample bottles?	**N/A**	
#6*Custody Seals Signed and dated?	**N/A**	
#7 *Chain of Custody present?	**Yes**	
#8 Any missing/extra samples?	**No**	
#9 Chain of Custody signed when relinquished/ received?	**Yes**	
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**	
#11 Container label(s) legible and intact?	**Yes**	
#12 Samples in proper container/ bottle?	**Yes**	
#13 Samples properly preserved?	**Yes**	
#14 Sample container(s) intact?	**Yes**	
#15 Sufficient sample amount for indicated test(s)?	**Yes**	
#16 All samples received within hold time?	**Yes**	
#17 Subcontract of sample(s)?	**Yes**	Chloride, TPH sent to Stafford
#18 Water VOC samples have zero headspace?	**N/A**	

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

Analyst: PH Device/Lot#:

Checklist completed by: Brenda Ward Date: 05.19.2020
Brenda Ward

Checklist reviewed by: Jessica Kramer Date: 05.19.2020
Jessica Kramer

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Certificate of Analysis Summary 671097

Terracon-Lubbock, Lubbock, TX

Project Name: BKU 33 FL Leak

Project Id: AR207091
Contact: Joseph Guesnier
Project Location:

Date Received in Lab: Wed 08.26.2020 15:26
Report Date: 08.28.2020 15:38
Project Manager: Jessica Kramer

Analysis Requested							
	Lab Id:	671097-001		671097-002			
	Field Id:	W-(1.5-2)		F-(3.5-4)			
	Depth:	1.5-2 ft		3.5-4 ft			
	Matrix:	SOIL		SOIL			
	Sampled:	08.25.2020 08:00		08.25.2020 08:05			
BTEX by EPA 8021B SUB: T104704400-20-21	***Extracted:***	08.27.2020 16:45		08.27.2020 16:45			
	Analyzed:	08.28.2020 00:00		08.28.2020 00:21			
	Units/RL:	mg/kg	RL	mg/kg	RL		
Benzene		<0.00200	0.00200	<0.00200	0.00200		
Toluene		<0.00200	0.00200	<0.00200	0.00200		
Ethylbenzene		<0.00200	0.00200	<0.00200	0.00200		
m,p-Xylenes		<0.00400	0.00400	<0.00400	0.00400		
o-Xylene		<0.00200	0.00200	<0.00200	0.00200		
Xylenes, Total		<0.00200	0.00200	<0.00200	0.00200		
Total BTEX		<0.00200	0.00200	<0.00200	0.00200		
Chloride by EPA 300 SUB: T104704400-20-21	***Extracted:***	08.27.2020 15:00		08.27.2020 15:00			
	Analyzed:	08.27.2020 16:10		08.27.2020 16:28			
	Units/RL:	mg/kg	RL	mg/kg	RL		
Chloride		489	4.95	508	5.04		
TPH by SW8015 Mod SUB: T104704400-20-21	***Extracted:***	08.27.2020 17:00		08.27.2020 17:00			
	Analyzed:	08.28.2020 08:08		08.28.2020 08:28			
	Units/RL:	mg/kg	RL	mg/kg	RL		
Gasoline Range Hydrocarbons (GRO)		<49.8	49.8	<50.0	50.0		
Diesel Range Organics (DRO)		<49.8	49.8	<50.0	50.0		
Motor Oil Range Hydrocarbons (MRO)		<49.8	49.8	<50.0	50.0		
Total TPH		<49.8	49.8	<50.0	50.0		

BRL - Below Reporting Limit

Jessica Kramer

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Analytical Report 671097

for

Terracon-Lubbock

Project Manager: Joseph Guesnier

BKU 33 FL Leak

AR207091

08.28.2020

Collected By: Client

6701 Aberdeen, Suite 9 Lubbock, TX 79424

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-37), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), 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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08.28.2020

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

Reference: Eurofins Xenco, LLC Report No(s): **671097**
BKU 33 FL Leak
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) 671097. 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. 671097 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 671097

Terracon-Lubbock, Lubbock, TX

BKU 33 FL Leak

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
W-(1.5-2)	S	08.25.2020 08:00	1.5 - 2 ft	671097-001
F-(3.5-4)	S	08.25.2020 08:05	3.5 - 4 ft	671097-002

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CASE NARRATIVE

Client Name: Terracon-Lubbock

Project Name: BKU 33 FL Leak

Project ID: *AR207091*
Work Order Number(s): *671097*

Report Date: *08.28.2020*
Date Received: *08.26.2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

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Certificate of Analytical Results 671097

Terracon-Lubbock, Lubbock, TX

BKU 33 FL Leak

Sample Id:	**W-(1.5-2)**	Matrix:	Soil	Date Received:	08.26.2020 15:26
Lab Sample Id:	671097-001	Date Collected:	08.25.2020 08:00	Sample Depth:	1.5 - 2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.27.2020 15:00	Basis:	Wet Weight
Seq Number:	3135772			SUB:	T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**489**	4.95	mg/kg	08.27.2020 16:10		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.27.2020 17:00	Basis:	Wet Weight
Seq Number:	3135833			SUB:	T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	08.28.2020 08:08	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	08.28.2020 08:08	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	08.28.2020 08:08	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	08.28.2020 08:08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-130	08.28.2020 08:08	
o-Terphenyl	84-15-1	109	%	70-130	08.28.2020 08:08	

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Certificate of Analytical Results 671097

Terracon-Lubbock, Lubbock, TX

BKU 33 FL Leak

Sample Id:	**W-(1.5-2)**	Matrix:	Soil	Date Received:	08.26.2020 15:26
Lab Sample Id:	671097-001	Date Collected:	08.25.2020 08:00	Sample Depth:	1.5 - 2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	08.27.2020 16:45	Basis:	Wet Weight
Seq Number:	3135780			SUB:	T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.28.2020 00:00	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.28.2020 00:00	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.28.2020 00:00	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	08.28.2020 00:00	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.28.2020 00:00	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	08.28.2020 00:00	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.28.2020 00:00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	123	%	70-130	08.28.2020 00:00	
1,4-Difluorobenzene	540-36-3	105	%	70-130	08.28.2020 00:00	

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Certificate of Analytical Results 671097

Terracon-Lubbock, Lubbock, TX

BKU 33 FL Leak

Sample Id:	**F-(3.5-4)**	Matrix:	Soil	Date Received:	08.26.2020 15:26
Lab Sample Id:	671097-002	Date Collected:	08.25.2020 08:05	Sample Depth:	3.5 - 4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.27.2020 15:00	Basis:	Wet Weight
Seq Number:	3135772			SUB:	T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**508**	5.04	mg/kg	08.27.2020 16:28		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.27.2020 17:00	Basis:	Wet Weight
Seq Number:	3135833			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	08.28.2020 08:28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.28.2020 08:28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.28.2020 08:28	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.28.2020 08:28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-130	08.28.2020 08:28	
o-Terphenyl	84-15-1	100	%	70-130	08.28.2020 08:28	

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Certificate of Analytical Results 671097

Terracon-Lubbock, Lubbock, TX

BKU 33 FL Leak

Sample Id:	**F-(3.5-4)**	Matrix:	Soil	Date Received:	08.26.2020 15:26
Lab Sample Id:	671097-002	Date Collected:	08.25.2020 08:05	Sample Depth:	3.5 - 4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	08.27.2020 16:45	Basis:	Wet Weight
Seq Number:	3135780			SUB:	T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.28.2020 00:21	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.28.2020 00:21	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.28.2020 00:21	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	08.28.2020 00:21	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.28.2020 00:21	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	08.28.2020 00:21	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.28.2020 00:21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	08.28.2020 00:21	
1,4-Difluorobenzene	540-36-3	105	%	70-130	08.28.2020 00:21	

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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 671097

Terracon-Lubbock

BKU 33 FL Leak

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3135772 — Matrix: Solid — Date Prep: 08.27.2020
MB Sample Id: 7710305-1-BLK — LCS Sample Id: 7710305-1-BKS — LCSD Sample Id: 7710305-1-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	249	100	90-110	1	20	mg/kg	08.27.2020 15:57	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3135772 — Matrix: Soil — Date Prep: 08.27.2020
Parent Sample Id: 671097-001 — MS Sample Id: 671097-001 S — MSD Sample Id: 671097-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	489	248	724	95	724	95	90-110	0	20	mg/kg	08.27.2020 16:16	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3135772 — Matrix: Soil — Date Prep: 08.27.2020
Parent Sample Id: 671138-002 — MS Sample Id: 671138-002 S — MSD Sample Id: 671138-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	327	252	577	99	579	100	90-110	0	20	mg/kg	08.27.2020 17:44	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3135833 — Matrix: Solid — Date Prep: 08.27.2020
MB Sample Id: 7710336-1-BLK — LCS Sample Id: 7710336-1-BKS — LCSD Sample Id: 7710336-1-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	1190	119	1070	107	70-130	11	20	mg/kg	08.28.2020 05:50	
Diesel Range Organics (DRO)	<50.0	1000	1180	118	1160	116	70-130	2	20	mg/kg	08.28.2020 05:50	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	98		127		114		70-130	%	08.28.2020 05:50
o-Terphenyl	111		128		118		70-130	%	08.28.2020 05:50

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3135833 — Matrix: Solid — Date Prep: 08.27.2020
MB Sample Id: 7710336-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	08.28.2020 09:28	

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

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

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

QC Summary 671097

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Terracon-Lubbock

BKU 33 FL Leak

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3135833 Matrix: Soil Date Prep: 08.27.2020
Parent Sample Id: 670839-001 MS Sample Id: 670839-001 S MSD Sample Id: 670839-001 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	997	979	98	992	100	70-130	1	20	mg/kg	08.28.2020 06:49	
Diesel Range Organics (DRO)	<49.9	997	1060	106	1070	107	70-130	1	20	mg/kg	08.28.2020 06:49	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	114		114		70-130	%	08.28.2020 06:49
o-Terphenyl	117		117		70-130	%	08.28.2020 06:49

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3135780 Matrix: Solid Date Prep: 08.27.2020
MB Sample Id: 7710343-1-BLK LCS Sample Id: 7710343-1-BKS LCSD Sample Id: 7710343-1-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	0.0920	92	0.0929	93	70-130	1	35	mg/kg	08.27.2020 08:57	
Toluene	<0.00200	0.100	0.0868	87	0.0904	90	70-130	4	35	mg/kg	08.27.2020 08:57	
Ethylbenzene	<0.00200	0.100	0.0932	93	0.0972	97	70-130	4	35	mg/kg	08.27.2020 08:57	
m,p-Xylenes	<0.00400	0.200	0.192	96	0.202	101	70-130	5	35	mg/kg	08.27.2020 08:57	
o-Xylene	<0.00200	0.100	0.0933	93	0.100	100	70-130	7	35	mg/kg	08.27.2020 08:57	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		99		97		70-130	%	08.27.2020 08:57
4-Bromofluorobenzene	96		112		116		70-130	%	08.27.2020 08:57

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3135780 Matrix: Soil Date Prep: 08.27.2020
Parent Sample Id: 671085-001 MS Sample Id: 671085-001 S MSD Sample Id: 671085-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00198	0.0992	0.0607	61	0.0594	60	70-130	2	35	mg/kg	08.27.2020 21:39	X
Toluene	<0.00198	0.0992	0.0580	58	0.0579	58	70-130	0	35	mg/kg	08.27.2020 21:39	X
Ethylbenzene	<0.00198	0.0992	0.0600	60	0.0608	61	70-130	1	35	mg/kg	08.27.2020 21:39	X
m,p-Xylenes	<0.00397	0.198	0.121	61	0.125	63	70-130	3	35	mg/kg	08.27.2020 21:39	X
o-Xylene	<0.00198	0.0992	0.0618	62	0.0641	64	70-130	4	35	mg/kg	08.27.2020 21:39	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		99		70-130	%	08.27.2020 21:39
4-Bromofluorobenzene	114		118		70-130	%	08.27.2020 21:39

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

671097-

CHAIN OF CUSTODY RECORD

Terracon

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

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

Project Number: AR207091
Project Name: BKU 33 FL Leak

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE:
TEMP OF COOLER WHEN RECEIVED (°C): -5.9/-5.76 IK-4

Page 2 of 2

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	8/25/2020	8:00	X		W - (1.5-2)	1.5	2	X				X	X	X		
S	8/25/2020	8:05	X		F - (3.5-4)	3.5	4	X				X	X	X		

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

TRRP Laboratory Review Checklist: ☐ Yes ☐ No

Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time
	8-26-20	3:25		8/26/20	15:26
			-5.9/-5.76		

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 : 69468

Date/Time:	08.26.2020	Created by:	Randall Lee	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.:	771369679724	E-Mail:	jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
671097-001	S	W-(1.5-2)	08.25.2020 08:00	SW8015MOD_NM	TPH by SW8015 Mod	08.28.2020	09.08.2020	JKR	PHCC10C28 PHCC28C3	
671097-001	S	W-(1.5-2)	08.25.2020 08:00	SW8021B	BTEX by EPA 8021B	08.28.2020	09.08.2020	JKR	BR4FBZ BZ BZME EBZ	
671097-001	S	W-(1.5-2)	08.25.2020 08:00	E300_CL	Chloride by EPA 300	08.28.2020	09.22.2020	JKR	CL	
671097-002	S	F-(3.5-4)	08.25.2020 08:05	SW8021B	BTEX by EPA 8021B	08.28.2020	09.08.2020	JKR	BR4FBZ BZ BZME EBZ	
671097-002	S	F-(3.5-4)	08.25.2020 08:05	E300_CL	Chloride by EPA 300	08.28.2020	09.22.2020	JKR	CL	
671097-002	S	F-(3.5-4)	08.25.2020 08:05	SW8015MOD_NM	TPH by SW8015 Mod	08.28.2020	09.08.2020	JKR	PHCC10C28 PHCC28C3	

Inter Office Shipment or Sample Comments:

Relinquished By: Teddy Randall Lee
Randall Lee

Date Relinquished: 08.26.2020

Received By: Brianna Teel
Brianna Teel

Date Received: 08.27.2020

Cooler Temperature: 0.5

Eurofins Xenco, LLC

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 69468

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

Sent By: Randall Lee **Date Sent:** 08.26.2020 04.13 PM

Received By: Brianna Teel **Date Received:** 08.27.2020 10.46 AM

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	.5	
#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: 08.27.2020

Brianna Teel

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Terracon-Lubbock

Date/ Time Received: 08.26.2020 03.26.00 PM

Work Order #: 671097

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)?	-5.8	
#2 *Shipping container in good condition?	**N/A**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**	
#5 Custody Seals intact on sample bottles?	**N/A**	
#6*Custody Seals Signed and dated?	**N/A**	
#7 *Chain of Custody present?	**Yes**	
#8 Any missing/extra samples?	**No**	
#9 Chain of Custody signed when relinquished/ received?	**Yes**	
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**	
#11 Container label(s) legible and intact?	**Yes**	
#12 Samples in proper container/ bottle?	**Yes**	
#13 Samples properly preserved?	**Yes**	
#14 Sample container(s) intact?	**Yes**	
#15 Sufficient sample amount for indicated test(s)?	**Yes**	
#16 All samples received within hold time?	**Yes**	
#17 Subcontract of sample(s)?	**Yes**	All tests sent to 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: Teddy Randall Lee
Randall Lee
Date: 08.26.2020

Checklist reviewed by: Jessica Kramer
Jessica Kramer
Date: 08.28.2020

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

Action 185367

CONDITIONS

Operator: Spur Energy Partners LLC 9655 Katy Freeway Houston, TX 77024	OGRID: 328947
	Action Number: 185367
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	We have received your closure report and final C-141 for Incident #NRM2013931703 BKU 33 FLOWLINE, thank you. This closure is approved.	6/13/2023