Spill Volume(Bbls) Calculator *Inputs in blue, Outputs in red*		
Length(Ft)	Width(Ft)	Depth(In)
50.000	20.000	3.500
Cubic Feet Impacted		291.667
Barrels		51.94
Soil Type		Clay/Sand
Bbls Assuming 100% Saturation		7.79
Saturation	Fluid present with shovel/backhoe	
Estimated Barrels Released		7.80000

Instructions
1.Input spill measurements below. Length and width need to be input in feet and depth in inches.
2. Select a soil type from the drop down menu. *3. Select a saturation level from the drop down menu.*
(For data gathering instructions see appendix tab)

Measurements	
Length (ft)	50
Width (ft)	20
Depth (in)	3.500

Terracon
4518 W. Pierce St. Carlsbad NM, 88220

November 13, 2024

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

Attn: New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico, NM 87505

RE: **OCD Closure Denial Response and Amended Closure Report**
TEX MACK 11 FEDERAL #118H
M-11-17S-31E
Eddy County, New Mexico
NMOCD No. nRM2008551917
Well API 30-015-41272
Terracon Project No. AR207079

To Whom It May Concern:

Terracon Consultants, Inc. (Terracon) is pleased to submit this amended closure report on behalf of Spur Energy Partners (Spur Energy) to the New Mexico Oil and Gas Conservation Division (NMOCD). This amended closure report is being submitted in response to NMOCD's October 20, 2021, email denial of the March 18, 2020, Release Investigation and Deferral Request prepared by Terracon.

The NMOCD rejected the submitted application ID # 38412, which requested approval of the release notification and corrective action (C-141) for incident ID # nRM2008551917, for the following reasons:

- ***rhamlet (10/20/2021),* The Remediation Plan is denied:**
  - **When nearby wells are used to determine depth to groundwater, the wells should be no further than ½ mile away from the site, and data should be no more than 25 years old, and well construction information should be provided. If evidence of depth to ground water within a ½ mile radius of the site cannot be provided, impacted soils will need to meet Table 1 Closure Criteria for ground water at a depth of 50 feet or less.**
  - **The updated closure report will need to include the corrected Site Assessment/Characterization. Please collect confirmation samples, representing no more than 200 ft^2. The closure report includes an inadequate number of floor samples.**
  - **The dimensions of the release on the site map do not match the photos of the excavation. Site map dimensions are roughly 30 ft wide 60 ft long and include a good portion of the road. This doesn't match the photo of the excavation. Please continue the excavation or correct the dimensions on the site map.**

- Summary and Completed Actions:
  - Terracon has not been able to identify any groundwater wells within 0.5-mile radius of the site. Therefore, the closure criteria will reflect the Table 1 Closure Criteria for ground water at a depth of 50 feet or less.
  - Four additional five-point composite confirmation samples were collected from the floor of the former excavation using a hand auger. The samples were collected on October 4, 2023, and below the NMOCD Criteria reflexed it Table 1.
  - We have reviewed the records from the 2021 excavation, and it appears the map presented in Terracon's March 18, 2020, Release Investigation Report did not accurately depict the area of investigation. The final sample map, presented as Exhibit 3, has been corrected to match the actual dimensions of the excavation and is consistent with the original photographic log.

Conclusion

In accordance with NMAC 19.15.29.12, and NMAC *19.15.29.1.C (2)* remediation of the impacted material is complete, and delineation has been attained in accordance with NMOCD criteria. Spur Energy Partners respectfully requests closure of incident ID nRM2008551917 that occurred March 18, 2020.

We at Terracon are deeply grateful for the opportunity to offer our environmental services to Spur Energy Partners. We are committed to providing the highest level of service and support. Should you need further information or have any queries, we encourage you to reach out to our office at your earliest convenience.

Sincerely,

Prepared by:

Travis Casey
Senior Scientist
Carlsbad, NM

Reviewed by:

John Grams, P.G. (TX)
Environmental Department Manager
Lubbock

Attachments

Appendix A – Exhibits

C-141 Summary Sheet
Exhibit 1 – Topographic Map
Exhibit 2 – Site Location Map
Exhibit 3 – Site Sample Map
Exhibit 4 – NMOSE POD Location Map
Exhibit 5 – Designated Wetland Location Map
Exhibit 6 – Cave Karst Public UCP Map
Table 1
Analytical Report

Appendix B – Terracon Standard of Care, Limitations & & Reliance

APPENDIX A – EXHIBITS

Tuesday, October 1, 2024

C-141 Summary Sheet

Summary of incident information relevant to C-141	
Name:	Kathy Purvis
Email:	katherine.purvis@spurenergy.com
Phone:	(575)441-8619

Initial Release C-141

Application Details

Incident ID:	nRM2008551917			
District:	Artesia			
County:	Eddy			
Legal Description:	Unit:M	Section:11	Township:17S	Range:31E
Lat/Long:	N:32.84568		E:-103.83940	

Prerequisites

Incident Operator:	Spur Energy Partners	
Release Type:	Produced Water	
Incident Status:	Report was rejected. Resubmitting. Pending NMOCD approval.	

Release Information

Site Name:	Tex Mack 11 Fedearl #118	
Date Discovered:	3/13/2020	*(MM/DD/YYY)*
Surface Owner:	Federal	

Incident Details

Incident Type:	Produced Water Release	
Fire:	No	
Injuries:	No	
Watercourse:	No	
Public Health:	No	
Significant to Property or Environment:	No	
Detrimental to Freshwater:	No	

Nature and Volume of Release

Released Product:	Produced Water	
Cause:	Corrosion	
Source:	Flow Line - Injection	
Release:	8	*(bbls/Mcf)*
Recovered:	3	*(bbls/Mcf)*
Additional Details:		

Nature and Volume of Release

Is this a gas submission	No	
was this a major release (Y/N) >25bbls	No	
Justification of release volume calculation	No	*(Attached Release Volume Calculation)*

Initial Response

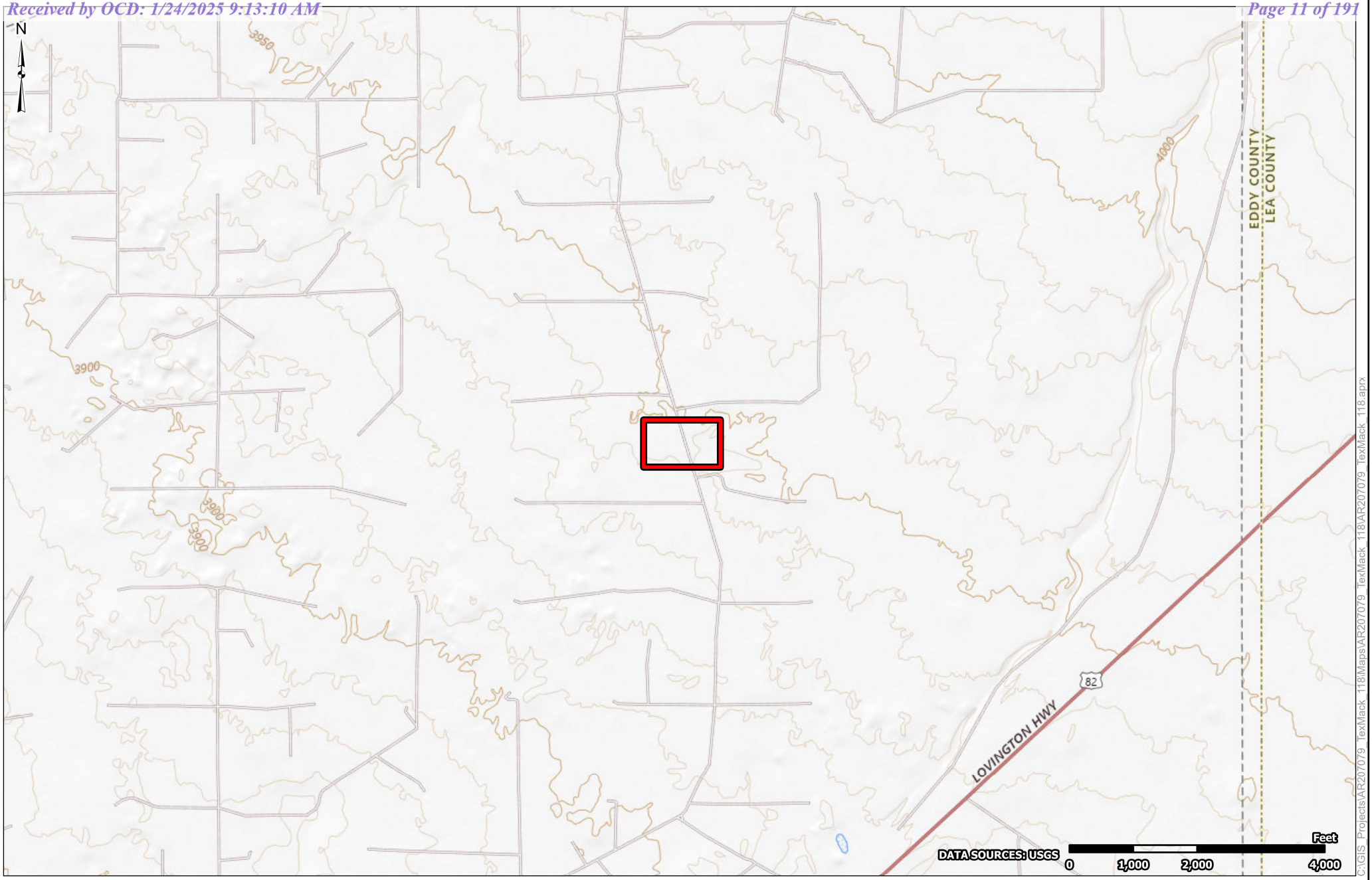
Release has been stopped	Yes	
release area has been secured:	Yes	
released material has been contained	Yes	
All free liquids have been recovered	Yes	
If actions have not been completed, why?		*(Attached Explination)*

Remediation Action Plan C-141

Site Characterization

what is groundwater beneath effected area?	75ft - 100ft		
What method was used to determine depth?	M OSE iWaters Database Sear		
Did release impact GW or Surface Water?	No		
continuously flowing watercourse	greater than 5 (mi.)		
lakebed, sinkhole, or playa (measured from the high-water mark)		greater than 5 (mi.)	
an occupied permanent residence	greater than 5 (mi.)		
spring or private domestic well	greater than 5 (mi.)		
Incorporated municipal boundaries	greater than 5 (mi.)		
wetland	between 1 to 5 (mi.)		
subsurface mine	greater than 5 (mi.)		
a (non-karst) unstable area	greater than 5 (mi.)		
categorize the risk of this well / site being in a karst geology		Low	
a 100-year floodplain		between 1 to 5 (mi.)	
did the release impact areas not on an exploration, development, production, or storage site			Yes

Remediation Plan			
Have lateral and vertical extents of impacts been delineated, to the strictest standards?	Yes		
Was the release entirely contained within a lined containment?	No		
Soil Contamination Sampling (provide the highest observed value for each)(0.1)	Chloride	12,900	(mg/kg)
	Total TPH	21,300.0	(mg/kg)
	GRO+DRO	19,520.0	(mg/kg)
	BTEX	670	(mg/kg)
	Benzene	19.9	(mg/kg)
Date of Remediation Commencement	5/14/2020		
Date of Final Sampling or Liner Inspection	10/4/2023		
Date of Remediation Completion	10/4/2023		
Estimated Surface Area (sq.ft) to be reclaimed	1,000		
Estimated Volume (cu. Yds) to be reclaimed	161		
Estimated Surface Area (sq.ft) to be remediated	1,000		
Estimated Volume (cu. Yds) to be remediated	200		
Excavation and off-site disposal (dig & haul)	Yes	(Ex-Situ)	
Excavation and on-site remediation (land farm)	No	(Ex-Situ)	
Soil Vapor Extraction	No	(In-Situ)	
Chemical processing (soil shredding...etc)	No	(In-Situ)	
Biological processing (microbes / fertilizer...etc)	No	(In-Situ)	
Physical processing (soil washing, gypsum...etc)	No	(In-Situ)	
Ground Water Abatement	No		
Other (Non-listed remedial process)	No		
Closure/Deferral Request C-141			
Deferral Request (attachment with explanation)	No		
All areas reasonably needed for production or subsequent drilling operations have been stabilized, returned to the sites existing grade, and have a soil cover that prevents ponding of water, minimizing dust and erosion	Yes		
Total Surface Area (sq.ft) to be remediated	1,000	(Square Feet)	
Total Volume (cu. Yds) to be remediated	200	(Cubic Yards)	
All areas not reasonably needed for production or subsequent drilling operations have been reclaimed to contain a minimum of four feet of non-waste contain earthen material with concentrations less than 600 mg/kg chlorides, 100 mg/kg TPH, 50 mg/kg BTEX, and 10 mg/kg Benzene	Yes		
Estimated Surface Area (sq.ft) to be reclaimed	1,000	(Square Feet)	
Estimated Volume (cu. Yds) to be reclaimed	161	(Cubic Yards)	
Attached Summary of additional remediation Activities	Yes		
Requesting approval of Reclamation Completion	No		



Site Location

Project No.:	AR207079
Date:	Oct 28 2024
Drawn By:	JWL
Reviewed By:	JRG

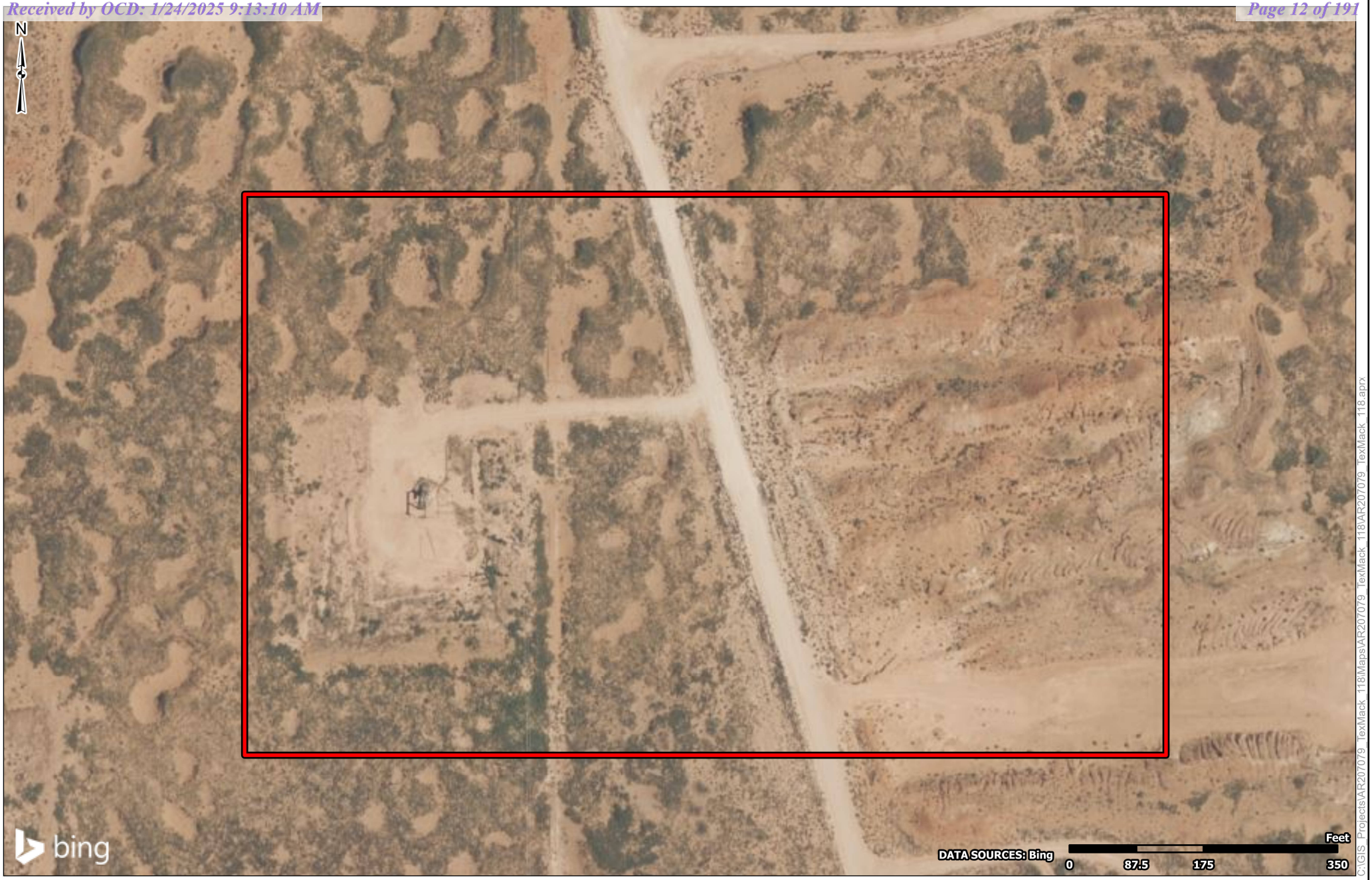
terracon
5847 50th St
Lubbock, TX
PH. 806-300-0140 terracon.com

Topographic Map

Tex Mack 11 Federal #118H
32.84568°, -103.83940°
Eddy County, New Mexico

Exhibit

1



Site Location

Project No.:	AR207079
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terracon
5847 50th St
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PH. 806-300-0140 terracon.com

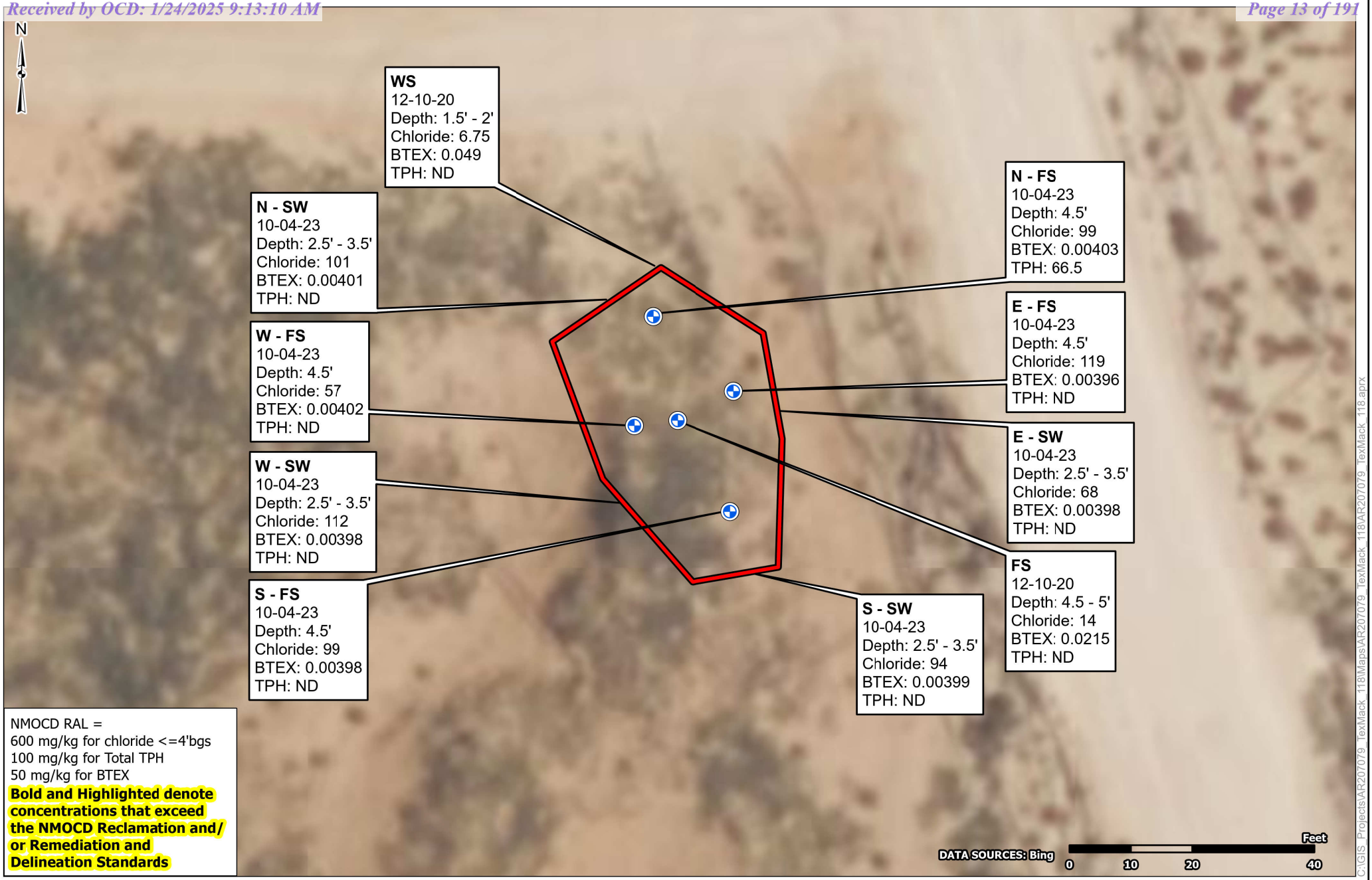
Site Location Map

Tex Mack 11 Federal #118H
32.84568°, -103.83940°
Eddy County, New Mexico

Exhibit

2

C:\GIS_Projects\AR207079_TexMack_118\Maps\AR207079_TexMack_118\AR207079_TexMack_118.aprx



Floor Sample Location

Excavation Perimeter

Project No.:	AR207079
Date:	Nov 18 2024
Drawn By:	JWL
Reviewed By:	JRG

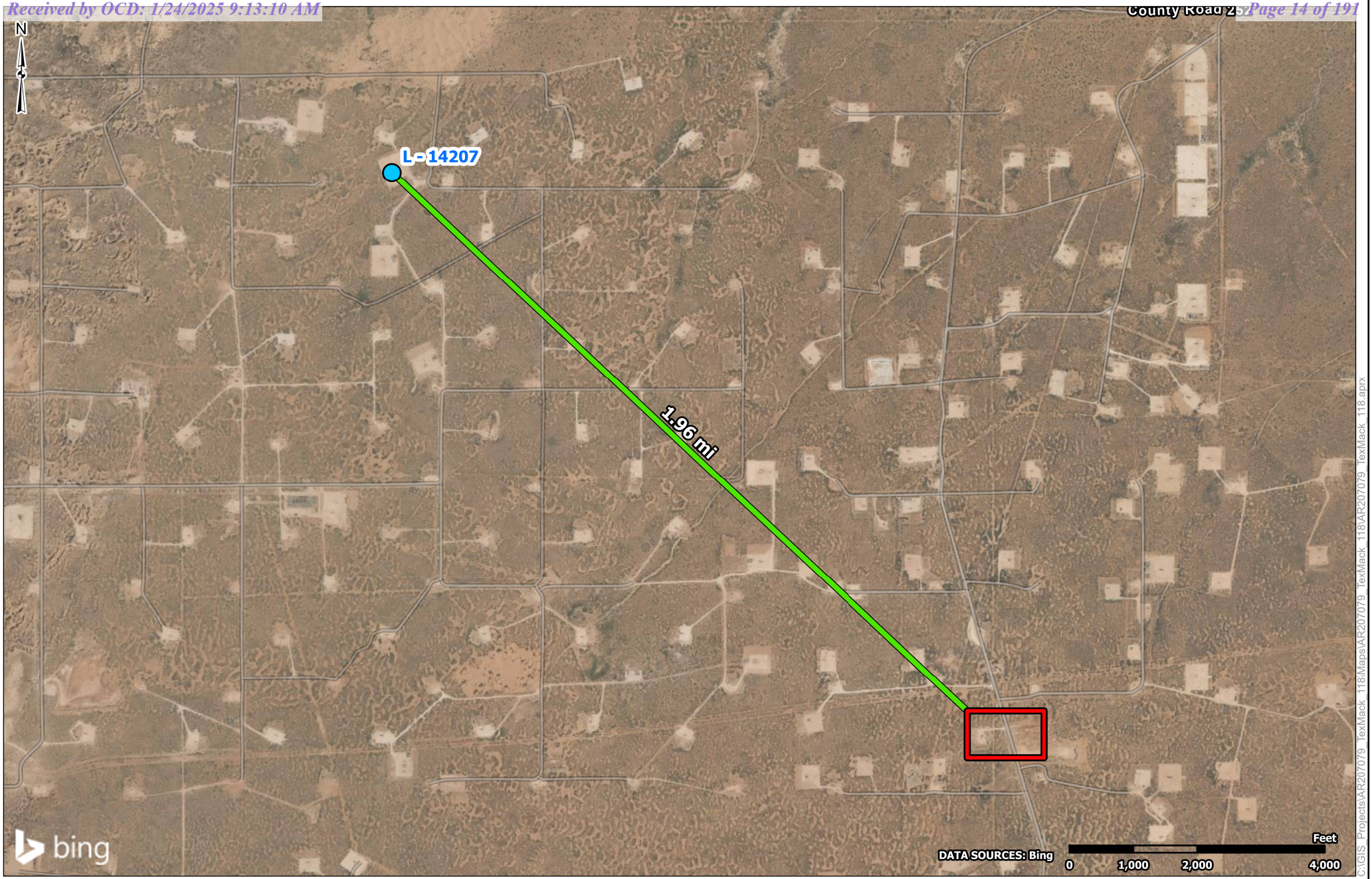
terracon
5847 50th St
Lubbock, TX
PH. 806-300-0140
terracon.com

Site Sample Map

Tex Mack 11 Federal #118H
32.84568°, -103.83940°
Eddy County, New Mexico

Exhibit

3



Site Location

NMOSE POD Location

Project No.:	AR207079
Date:	Oct 28 2024
Drawn By:	JWL
Reviewed By:	JRG

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Lubbock, TX
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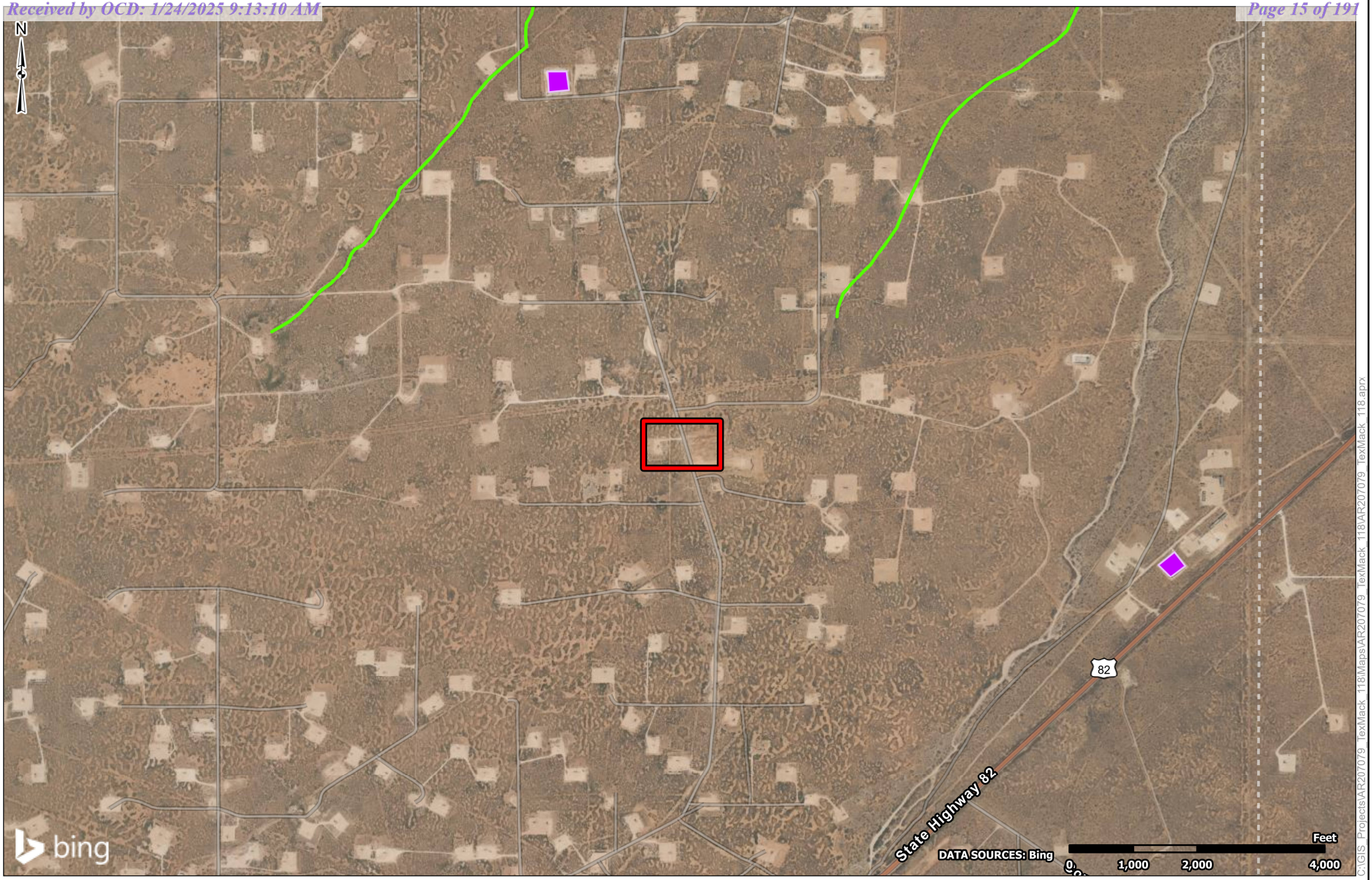
terracon.com

NMOSE POD Location Map

Tex Mack 11 Federal #118H
32.84568°, -103.83940°
Eddy County, New Mexico

Exhibit

4



Site Location

Freshwater Pond

Riverine

Project No.:	AR207079
Date:	Oct 28 2024
Drawn By:	JWL
Reviewed By:	JRG

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Lubbock, TX
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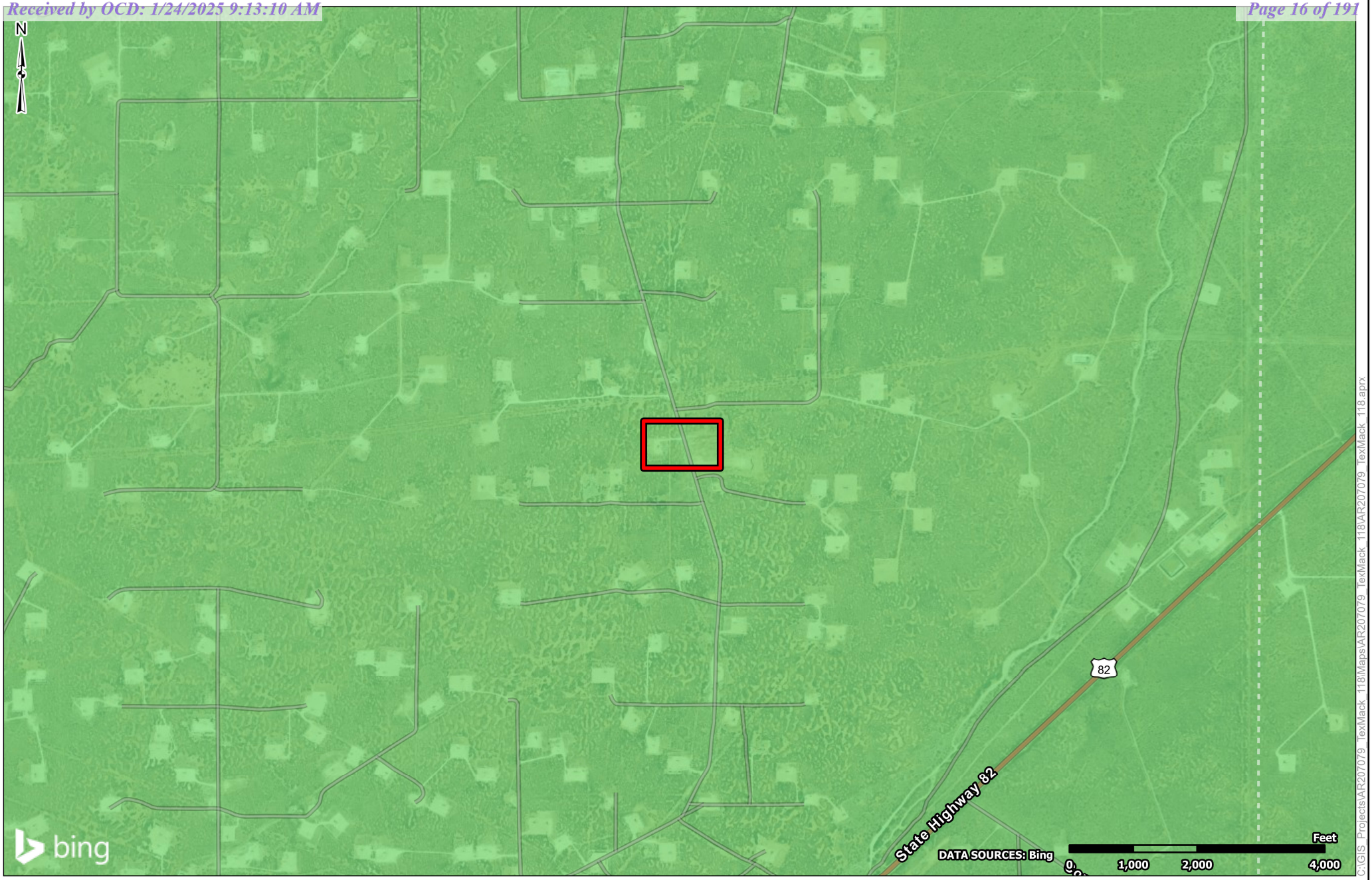
Designated Wetland Location Map

Tex Mack 11 Federal #118H
32.84568°, -103.83940°
Eddy County, New Mexico

Exhibit

5



Site Location

Karst Potential

Low

Medium

High

Project No.:	AR207079
Date:	Oct 28 2024
Drawn By:	JWL
Reviewed By:	JRG

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PH. 806-300-0140 terracon.com

Cave Karst Public UCP Map

Tex Mack 11 Federal #118H
32.84568°, -103.83940°
Eddy County, New Mexico

Exhibit

6

Table 1
Soil Analytical Results Summary - Confirmation Evaluation
Tex Mack 11 Federal #118H
NMOCD Reference No. nRM2008551917

Sample ID	Sample Date	Sample Depth (ft bgs)	Sample Type	Sample Status	Chloride (mg/Kg)	Benzene (mg/Kg)	Total BTEX[1] (mg/Kg)	Total TPH[2] (mg/Kg)	Diesel Range Organics (Over C10-C28) (mg/Kg)	Gasoline Range Organics (C6-C10) (mg/Kg)	Oil Range Organics (Over C28-C36) (mg/Kg)
					EPA Method 300	EPA Method 8021B	EPA Method 8021B	EPA Method 8015M	EPA Method 8015M	EPA Method 8015M	EPA Method 8015M
Composite Confirmation Samples (Wall Samples)											
WS (1.5-2)	12/10/2020	1.5-2	Composite	In-situ	6.75	ND	0.049	ND	ND	ND	ND
E - SW	10/4/2023	2.5-3.5	Composite	In-situ	68	0.00199	0.00398	ND	ND	ND	ND
N - SW	10/4/2023	2.5-3.5	Composite	In-situ	101	0.002	0.00401	ND	ND	ND	ND
S - SW	10/4/2023	2.5-3.5	Composite	In-situ	94	0.002	0.00399	ND	ND	ND	ND
W - SW	10/4/2023	2.5-3.5	Composite	In-situ	112	0.00199	0.00398	ND	ND	ND	ND
Composite Confirmation Samples (Floor Samples)											
FS (4.5-5)	12/10/2020	4.5	Composite	In-situ	14	ND	0.0215	ND	ND	ND	ND
E - FS	10/4/2023	4.5	Composite	In-situ	119	0.00198	0.00396	ND	ND	ND	ND
N - FS	10/4/2023	4.5	Composite	In-situ	99	0.002	0.00403	66.5	66.5	ND	ND
S - FS	10/4/2023	4.5	Composite	In-situ	99	0.00199	0.00398	ND	ND	ND	ND
W - FS	10/4/2023	4.5	Composite	In-situ	57	0.00201	0.00402	ND	ND	ND	ND
NMOCD Reclamation Standards[3] (Surface to 4 ft bgs)					600	10	50	100	N/A		
NMOCD Remediation Standards[4] (Greater than Depths of 4 ft bgs)					10000	10	50	2500	N/A		

1. BTEX = Benzene, toluene, ethylbenzene, and total xylenes
2. TPH = Total petroleum hydrocarbons
3. New Mexico Administration Code (NMAC) Restoration, Reclamation and Re-vegatation (19.15.29.13), NMAC-D (Reclamation of Areas No Longer in Use) for Soils Extending to 4 ft. bgs
4. New Mexico Oil Conservation Division (NMOCD) Remediation and Delineation Standards (19.15.29.12) NMAC-N, 8/14/2018

< = Constituent was not detected above the indicated laboratory sample detection limit (SDL).
NA = Not Analyzed
Bold denotes concentrations above applicable laboratory SDLs.
Bold and Highlighted denote concentrations that exceed the NMOCD Reclamation and/or Remediation and Delineation Standards.
In-situ = Sample is representative of material which remains in-place at the site.
Excavated = Sample is representative of materials which was excavated and disposed of at a permited disposal facility.

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Joseph Guesnier
Terracon Consulting Eng & Scientists
5847 50th St
Lubbock, Texas 79424

Generated 10/13/2023 11:18:45 AM

JOB DESCRIPTION

TEX MACK
SDG NUMBER AR 207079

JOB NUMBER

890-5414-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

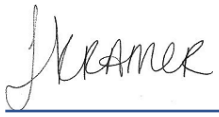
Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



Generated
10/13/2023 11:18:45 AM

Authorized for release by
Jessica Kramer, Project Manager
Jessica.Kramer@et.eurofinsus.com
(432)704-5440

Eurofins Carlsbad

Compliance Statement

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD,and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments. QC data that exceed the upper limits and are associated with non-detect samples are qualified but no further narration is needed since the bias is high and does not change a non-detect result. Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Coliform MCLs
· Based on the EPA primary drinking water standard MCL for total coliforms, a water supply is considered bacteriologically "SAFE" if no coliform bacteria are detected. To be considered "SAFE" your report should indicate "<1 cfu/100mL" or "NEG" for the coliform test. If you report indicates a positive result "POS" or a value greater than or equal to one, then your supply is "UNSAFE FOR DRINKING" contact your local health department.

Warranties, Terms, and Conditions
· Analyses for Field Parameters are performed by Eurofins Philadelphia field staff. Locations and certifications are identified on the Chain of Custody as follows:

ERF = field staff performs tests under NJ State certification # 02015.
VL = field staff performs tests under NJ State certification # 06005.
WG = field staff performs tests under NJ State certification # PA001, PA State certification # 48-01334.
H = field staff performs tests under NJ NELAP certification # PA093, PA NELAP certification # 46-05499.

· Test results meet all TNI or other applicable regulatory agency requirements, including holding times and preservation, unless otherwise indicated.

· The report shall not be reproduced, except in full, without the written consent of the laboratory

· All samples are collected as "grab" samples unless otherwise identified.

· Reported results related only to the samples as tested. Eurofins Philadelphia is not responsible for sample integrity unless sampling has been performed by a member of our staff.

· Eurofins Philadelphia is not responsible for sampling and/or testing omissions. Note that regulatory authorities may assess substantial fines for testing omissions. Please track your sample collection schedules and results on a regular basis (e.g. weekly, monthly, or quarterly) to ensure compliance.

· Eurofins' online data portal "TotalAccess" will provide you with real-time access to collection dates and testing results. Please contact Client Services for further information.

· The following personnel or their deputies have approved the results of the tests performed by Eurofins Philadelphia : Nicki Smith (Environmental Chemistry) and Jacqueline Gartner (Water Microbiology).

Client: Terracon Consulting Eng & Scientists
Project/Site: TEX MACK

Laboratory Job ID: 890-5414-1
SDG: AR 207079

Table of Contents

Definitions/Glossary

Client: Terracon Consulting Eng & Scientists
Project/Site: TEX MACK

Job ID: 890-5414-1
SDG: AR 207079

Qualifiers

GC VOA

Qualifier	Qualifier Description
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Terracon Consulting Eng & Scientists
Project/Site: TEX MACK

Job ID: 890-5414-1
SDG: AR 207079

Job ID: 890-5414-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-5414-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 10/5/2023 8:08 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was -1.2°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: N-FS (890-5414-1), S-FS (890-5414-2), E-FS (890-5414-3), W-FS (890-5414-4), N-SW (890-5414-5), S-SW (890-5414-6), E-SW (890-5414-7) and W-SW (890-5414-8).

GC VOA
Method 8021B: Surrogate recovery for the following samples were outside control limits: S-FS (890-5414-2), E-FS (890-5414-3), N-SW (890-5414-5), W-SW (890-5414-8), (LCSD 880-64149/2-A) and (890-5414-A-1-D MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-64149 and analytical batch 880-64401 was outside the upper control limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: N-SW (890-5414-5). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: TEX MACK

Job ID: 890-5414-1
SDG: AR 207079

Client Sample ID: N-FS

Date Collected: 10/04/23 16:10
Date Received: 10/05/23 08:08
Sample Depth: 4.5'

Lab Sample ID: 890-5414-1
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		10/06/23 15:31	10/11/23 12:06	1
Toluene	<0.00202	U	0.00202		mg/Kg		10/06/23 15:31	10/11/23 12:06	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		10/06/23 15:31	10/11/23 12:06	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		10/06/23 15:31	10/11/23 12:06	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		10/06/23 15:31	10/11/23 12:06	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		10/06/23 15:31	10/11/23 12:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*130*		*70 - 130*	*10/06/23 15:31*	*10/11/23 12:06*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*10/06/23 15:31*	*10/11/23 12:06*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			10/11/23 12:06	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**66.5**		49.8		mg/Kg			10/09/23 15:39	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		10/06/23 13:53	10/09/23 15:39	1
Diesel Range Organics (Over C10-C28)	**66.5**		49.8		mg/Kg		10/06/23 13:53	10/09/23 15:39	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		10/06/23 13:53	10/09/23 15:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*10/06/23 13:53*	*10/09/23 15:39*	*1*
o-Terphenyl	*98*		*70 - 130*	*10/06/23 13:53*	*10/09/23 15:39*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**99.4**		5.02		mg/Kg			10/10/23 00:15	1

Client Sample ID: S-FS

Date Collected: 10/04/23 15:20
Date Received: 10/05/23 08:08
Sample Depth: 4.5'

Lab Sample ID: 890-5414-2
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		10/06/23 15:31	10/11/23 12:32	1
Toluene	<0.00199	U	0.00199		mg/Kg		10/06/23 15:31	10/11/23 12:32	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		10/06/23 15:31	10/11/23 12:32	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		10/06/23 15:31	10/11/23 12:32	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		10/06/23 15:31	10/11/23 12:32	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		10/06/23 15:31	10/11/23 12:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*133*	*S1+*	*70 - 130*	*10/06/23 15:31*	*10/11/23 12:32*	*1*

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: TEX MACK

Job ID: 890-5414-1
SDG: AR 207079

Client Sample ID: S-FS

Date Collected: 10/04/23 15:20
Date Received: 10/05/23 08:08
Sample Depth: 4.5'

Lab Sample ID: 890-5414-2

Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*10/06/23 15:31*	*10/11/23 12:32*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			10/11/23 12:32	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.3	U	50.3		mg/Kg			10/09/23 16:23	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.3	U	50.3		mg/Kg		10/06/23 13:53	10/09/23 16:23	1
Diesel Range Organics (Over C10-C28)	<50.3	U	50.3		mg/Kg		10/06/23 13:53	10/09/23 16:23	1
OII Range Organics (Over C28-C36)	<50.3	U	50.3		mg/Kg		10/06/23 13:53	10/09/23 16:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*92*		*70 - 130*	*10/06/23 13:53*	*10/09/23 16:23*	*1*
o-Terphenyl	*94*		*70 - 130*	*10/06/23 13:53*	*10/09/23 16:23*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**99.0**		4.95		mg/Kg			10/10/23 00:21	1

Client Sample ID: E-FS

Date Collected: 10/04/23 14:21
Date Received: 10/05/23 08:08
Sample Depth: 4.5'

Lab Sample ID: 890-5414-3

Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		10/06/23 15:31	10/11/23 12:58	1
Toluene	<0.00198	U	0.00198		mg/Kg		10/06/23 15:31	10/11/23 12:58	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		10/06/23 15:31	10/11/23 12:58	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		10/06/23 15:31	10/11/23 12:58	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		10/06/23 15:31	10/11/23 12:58	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		10/06/23 15:31	10/11/23 12:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*147*	*S1+*	*70 - 130*	*10/06/23 15:31*	*10/11/23 12:58*	*1*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*10/06/23 15:31*	*10/11/23 12:58*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			10/11/23 12:58	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.2	U	50.2		mg/Kg			10/09/23 16:45	1

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: TEX MACK

Job ID: 890-5414-1
SDG: AR 207079

Client Sample ID: E-FS

Lab Sample ID: 890-5414-3
Matrix: Solid
Date Collected: 10/04/23 14:21
Date Received: 10/05/23 08:08
Sample Depth: 4.5'

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.2	U	50.2		mg/Kg		10/06/23 13:53	10/09/23 16:45	1
Diesel Range Organics (Over C10-C28)	<50.2	U	50.2		mg/Kg		10/06/23 13:53	10/09/23 16:45	1
OII Range Organics (Over C28-C36)	<50.2	U	50.2		mg/Kg		10/06/23 13:53	10/09/23 16:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*105*		*70 - 130*	*10/06/23 13:53*	*10/09/23 16:45*	*1*
o-Terphenyl	*107*		*70 - 130*	*10/06/23 13:53*	*10/09/23 16:45*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**119**		4.97		mg/Kg			10/10/23 00:41	1

Client Sample ID: W-FS

Lab Sample ID: 890-5414-4
Matrix: Solid
Date Collected: 10/04/23 14:02
Date Received: 10/05/23 08:08
Sample Depth: 4.5'

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		10/06/23 15:31	10/11/23 13:24	1
Toluene	<0.00201	U	0.00201		mg/Kg		10/06/23 15:31	10/11/23 13:24	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		10/06/23 15:31	10/11/23 13:24	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		10/06/23 15:31	10/11/23 13:24	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		10/06/23 15:31	10/11/23 13:24	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		10/06/23 15:31	10/11/23 13:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*130*		*70 - 130*	*10/06/23 15:31*	*10/11/23 13:24*	*1*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*	*10/06/23 15:31*	*10/11/23 13:24*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			10/11/23 13:24	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.5	U	50.5		mg/Kg			10/09/23 17:07	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.5	U	50.5		mg/Kg		10/06/23 13:53	10/09/23 17:07	1
Diesel Range Organics (Over C10-C28)	<50.5	U	50.5		mg/Kg		10/06/23 13:53	10/09/23 17:07	1
OII Range Organics (Over C28-C36)	<50.5	U	50.5		mg/Kg		10/06/23 13:53	10/09/23 17:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*97*		*70 - 130*	*10/06/23 13:53*	*10/09/23 17:07*	*1*
o-Terphenyl	*98*		*70 - 130*	*10/06/23 13:53*	*10/09/23 17:07*	*1*

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: TEX MACK

Job ID: 890-5414-1
SDG: AR 207079

Client Sample ID: W-FS

Lab Sample ID: 890-5414-4
Matrix: Solid
Date Collected: 10/04/23 14:02
Date Received: 10/05/23 08:08
Sample Depth: 4.5'

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	56.6		4.99		mg/Kg			10/10/23 00:48	1

Client Sample ID: N-SW

Lab Sample ID: 890-5414-5
Matrix: Solid
Date Collected: 10/04/23 12:18
Date Received: 10/05/23 08:08
Sample Depth: 2.5'-3.5

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/06/23 15:31	10/11/23 13:50	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/06/23 15:31	10/11/23 13:50	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/06/23 15:31	10/11/23 13:50	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		10/06/23 15:31	10/11/23 13:50	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/06/23 15:31	10/11/23 13:50	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		10/06/23 15:31	10/11/23 13:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*133*	*S1+*	*70 - 130*	*10/06/23 15:31*	*10/11/23 13:50*	*1*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*	*10/06/23 15:31*	*10/11/23 13:50*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			10/11/23 13:50	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.4	U	50.4		mg/Kg			10/09/23 17:30	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.4	U	50.4		mg/Kg		10/06/23 13:53	10/09/23 17:30	1
Diesel Range Organics (Over C10-C28)	<50.4	U	50.4		mg/Kg		10/06/23 13:53	10/09/23 17:30	1
OII Range Organics (Over C28-C36)	<50.4	U	50.4		mg/Kg		10/06/23 13:53	10/09/23 17:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*49*	*S1-*	*70 - 130*	*10/06/23 13:53*	*10/09/23 17:30*	*1*
o-Terphenyl	*40*	*S1-*	*70 - 130*	*10/06/23 13:53*	*10/09/23 17:30*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	101		4.96		mg/Kg			10/10/23 00:55	1

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: TEX MACK

Job ID: 890-5414-1
SDG: AR 207079

Client Sample ID: S-SW

Date Collected: 10/04/23 13:09
Date Received: 10/05/23 08:08
Sample Depth: 2.5'-3.5

Lab Sample ID: 890-5414-6
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/06/23 15:31	10/11/23 14:16	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/06/23 15:31	10/11/23 14:16	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/06/23 15:31	10/11/23 14:16	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		10/06/23 15:31	10/11/23 14:16	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/06/23 15:31	10/11/23 14:16	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		10/06/23 15:31	10/11/23 14:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*129*		*70 - 130*	*10/06/23 15:31*	*10/11/23 14:16*	*1*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*	*10/06/23 15:31*	*10/11/23 14:16*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			10/11/23 14:16	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.7	U	49.7		mg/Kg			10/09/23 17:52	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.7	U	49.7		mg/Kg		10/06/23 13:53	10/09/23 17:52	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7		mg/Kg		10/06/23 13:53	10/09/23 17:52	1
OII Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		10/06/23 13:53	10/09/23 17:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*93*		*70 - 130*	*10/06/23 13:53*	*10/09/23 17:52*	*1*
o-Terphenyl	*89*		*70 - 130*	*10/06/23 13:53*	*10/09/23 17:52*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**94.2**		4.98		mg/Kg			10/10/23 01:01	1

Client Sample ID: E-SW

Date Collected: 10/04/23 13:45
Date Received: 10/05/23 08:08
Sample Depth: 2.5'-3.5

Lab Sample ID: 890-5414-7
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		10/06/23 15:31	10/11/23 14:42	1
Toluene	<0.00199	U	0.00199		mg/Kg		10/06/23 15:31	10/11/23 14:42	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		10/06/23 15:31	10/11/23 14:42	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		10/06/23 15:31	10/11/23 14:42	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		10/06/23 15:31	10/11/23 14:42	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		10/06/23 15:31	10/11/23 14:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*84*		*70 - 130*	*10/06/23 15:31*	*10/11/23 14:42*	*1*

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: TEX MACK

Job ID: 890-5414-1
SDG: AR 207079

Client Sample ID: E-SW

Lab Sample ID: 890-5414-7
Matrix: Solid
Date Collected: 10/04/23 13:45
Date Received: 10/05/23 08:08
Sample Depth: 2.5'-3.5

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*10/06/23 15:31*	*10/11/23 14:42*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			10/11/23 14:42	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			10/09/23 18:14	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		10/06/23 13:53	10/09/23 18:14	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		10/06/23 13:53	10/09/23 18:14	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		10/06/23 13:53	10/09/23 18:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*107*		*70 - 130*	*10/06/23 13:53*	*10/09/23 18:14*	*1*
o-Terphenyl	*109*		*70 - 130*	*10/06/23 13:53*	*10/09/23 18:14*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**68.2**		4.98		mg/Kg			10/10/23 01:08	1

Client Sample ID: W-SW

Lab Sample ID: 890-5414-8
Matrix: Solid
Date Collected: 10/04/23 13:31
Date Received: 10/05/23 08:08
Sample Depth: 2.5'-3.5

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		10/06/23 15:31	10/11/23 15:08	1
Toluene	<0.00199	U	0.00199		mg/Kg		10/06/23 15:31	10/11/23 15:08	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		10/06/23 15:31	10/11/23 15:08	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		10/06/23 15:31	10/11/23 15:08	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		10/06/23 15:31	10/11/23 15:08	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		10/06/23 15:31	10/11/23 15:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*131*	*S1+*	*70 - 130*	*10/06/23 15:31*	*10/11/23 15:08*	*1*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*	*10/06/23 15:31*	*10/11/23 15:08*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			10/11/23 15:08	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			10/09/23 18:35	1

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: TEX MACK

Job ID: 890-5414-1
SDG: AR 207079

Client Sample ID: W-SW
Date Collected: 10/04/23 13:31
Date Received: 10/05/23 08:08
Sample Depth: 2.5'-3.5

Lab Sample ID: 890-5414-8
Matrix: Solid

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		10/06/23 13:53	10/09/23 18:35	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		10/06/23 13:53	10/09/23 18:35	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		10/06/23 13:53	10/09/23 18:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*127*		*70 - 130*	*10/06/23 13:53*	*10/09/23 18:35*	*1*
o-Terphenyl	*129*		*70 - 130*	*10/06/23 13:53*	*10/09/23 18:35*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**112**		5.02		mg/Kg			10/10/23 01:15	1

Surrogate Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: TEX MACK

Job ID: 890-5414-1
SDG: AR 207079

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
890-5414-1	N-FS	130	96
890-5414-1 MS	N-FS	122	93
890-5414-1 MSD	N-FS	137 S1+	111
890-5414-2	S-FS	133 S1+	96
890-5414-3	E-FS	147 S1+	104
890-5414-4	W-FS	130	113
890-5414-5	N-SW	133 S1+	106
890-5414-6	S-SW	129	110
890-5414-7	E-SW	84	95
890-5414-8	W-SW	131 S1+	87
LCS 880-64149/1-A	Lab Control Sample	124	103
LCSD 880-64149/2-A	Lab Control Sample Dup	136 S1+	113
MB 880-64149/5-A	Method Blank	68 S1-	93

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-5414-1	N-FS	96	98
890-5414-2	S-FS	92	94
890-5414-3	E-FS	105	107
890-5414-4	W-FS	97	98
890-5414-5	N-SW	49 S1-	40 S1-
890-5414-6	S-SW	93	89
890-5414-7	E-SW	107	109
890-5414-8	W-SW	127	129
LCS 880-64055/2-A	Lab Control Sample	102	106
LCSD 880-64055/3-A	Lab Control Sample Dup	115	119
MB 880-64055/1-A	Method Blank	76	85

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: TEX MACK

Job ID: 890-5414-1
SDG: AR 207079

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-64149/5-A
Matrix: Solid
Analysis Batch: 64401

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 64149

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		10/06/23 15:31	10/11/23 11:39	1
Toluene	<0.00200	U	0.00200		mg/Kg		10/06/23 15:31	10/11/23 11:39	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		10/06/23 15:31	10/11/23 11:39	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		10/06/23 15:31	10/11/23 11:39	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		10/06/23 15:31	10/11/23 11:39	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		10/06/23 15:31	10/11/23 11:39	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*68*	*S1-*	*70 - 130*	*10/06/23 15:31*	*10/11/23 11:39*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*10/06/23 15:31*	*10/11/23 11:39*	*1*

Lab Sample ID: LCS 880-64149/1-A
Matrix: Solid
Analysis Batch: 64401

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 64149

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1146		mg/Kg		115	70 - 130
Toluene	0.100	0.1236		mg/Kg		124	70 - 130
Ethylbenzene	0.100	0.1173		mg/Kg		117	70 - 130
m-Xylene & p-Xylene	0.200	0.2229		mg/Kg		111	70 - 130
o-Xylene	0.100	0.1057		mg/Kg		106	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*124*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: LCSD 880-64149/2-A
Matrix: Solid
Analysis Batch: 64401

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 64149

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1221		mg/Kg		122	70 - 130	6	35
Toluene	0.100	0.1265		mg/Kg		126	70 - 130	2	35
Ethylbenzene	0.100	0.1240		mg/Kg		124	70 - 130	6	35
m-Xylene & p-Xylene	0.200	0.2406		mg/Kg		120	70 - 130	8	35
o-Xylene	0.100	0.1214		mg/Kg		121	70 - 130	14	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*136*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*

Lab Sample ID: 890-5414-1 MS
Matrix: Solid
Analysis Batch: 64401

Client Sample ID: N-FS
Prep Type: Total/NA
Prep Batch: 64149

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00202	U	0.0990	0.08059		mg/Kg		81	70 - 130
Toluene	<0.00202	U	0.0990	0.09366		mg/Kg		95	70 - 130

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: TEX MACK

Job ID: 890-5414-1
SDG: AR 207079

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 890-5414-1 MS
Matrix: Solid
Analysis Batch: 64401

Client Sample ID: N-FS
Prep Type: Total/NA
Prep Batch: 64149

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00202	U	0.0990	0.08958		mg/Kg		90	70 - 130
m-Xylene & p-Xylene	<0.00403	U	0.198	0.1707		mg/Kg		86	70 - 130
o-Xylene	<0.00202	U	0.0990	0.09972		mg/Kg		101	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*122*		*70 - 130*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*

Lab Sample ID: 890-5414-1 MSD
Matrix: Solid
Analysis Batch: 64401

Client Sample ID: N-FS
Prep Type: Total/NA
Prep Batch: 64149

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U	0.0992	0.09788		mg/Kg		99	70 - 130	19	35
Toluene	<0.00202	U	0.0992	0.1147		mg/Kg		116	70 - 130	20	35
Ethylbenzene	<0.00202	U	0.0992	0.1132		mg/Kg		114	70 - 130	23	35
m-Xylene & p-Xylene	<0.00403	U	0.198	0.2172		mg/Kg		109	70 - 130	24	35
o-Xylene	<0.00202	U	0.0992	0.1121		mg/Kg		113	70 - 130	12	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*137*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-64055/1-A
Matrix: Solid
Analysis Batch: 64187

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 64055

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		10/05/23 17:18	10/09/23 09:00	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		10/05/23 17:18	10/09/23 09:00	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		10/05/23 17:18	10/09/23 09:00	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*76*		*70 - 130*	*10/05/23 17:18*	*10/09/23 09:00*	*1*
o-Terphenyl	*85*		*70 - 130*	*10/05/23 17:18*	*10/09/23 09:00*	*1*

Lab Sample ID: LCS 880-64055/2-A
Matrix: Solid
Analysis Batch: 64187

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 64055

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1196		mg/Kg		120	70 - 130
Diesel Range Organics (Over C10-C28)	1000	914.2		mg/Kg		91	70 - 130

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: TEX MACK

Job ID: 890-5414-1
SDG: AR 207079

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCS 880-64055/2-A
Matrix: Solid
Analysis Batch: 64187

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 64055

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*102*		*70 - 130*
o-Terphenyl	*106*		*70 - 130*

Lab Sample ID: LCSD 880-64055/3-A
Matrix: Solid
Analysis Batch: 64187

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 64055

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1033		mg/Kg		103	70 - 130	15	20
Diesel Range Organics (Over C10-C28)			1000	1004		mg/Kg		100	70 - 130	9	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*115*		*70 - 130*
o-Terphenyl	*119*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-64131/1-A
Matrix: Solid
Analysis Batch: 64310

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			10/09/23 22:02	1

Lab Sample ID: LCS 880-64131/2-A
Matrix: Solid
Analysis Batch: 64310

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	249.8		mg/Kg		100	90 - 110		

Lab Sample ID: LCSD 880-64131/3-A
Matrix: Solid
Analysis Batch: 64310

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	249.9		mg/Kg		100	90 - 110	0	20

QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: TEX MACK

Job ID: 890-5414-1
SDG: AR 207079

GC VOA

Prep Batch: 64149

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5414-1	N-FS	Total/NA	Solid	5035	
890-5414-2	S-FS	Total/NA	Solid	5035	
890-5414-3	E-FS	Total/NA	Solid	5035	
890-5414-4	W-FS	Total/NA	Solid	5035	
890-5414-5	N-SW	Total/NA	Solid	5035	
890-5414-6	S-SW	Total/NA	Solid	5035	
890-5414-7	E-SW	Total/NA	Solid	5035	
890-5414-8	W-SW	Total/NA	Solid	5035	
MB 880-64149/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-64149/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-64149/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-5414-1 MS	N-FS	Total/NA	Solid	5035	
890-5414-1 MSD	N-FS	Total/NA	Solid	5035	

Analysis Batch: 64401

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5414-1	N-FS	Total/NA	Solid	8021B	64149
890-5414-2	S-FS	Total/NA	Solid	8021B	64149
890-5414-3	E-FS	Total/NA	Solid	8021B	64149
890-5414-4	W-FS	Total/NA	Solid	8021B	64149
890-5414-5	N-SW	Total/NA	Solid	8021B	64149
890-5414-6	S-SW	Total/NA	Solid	8021B	64149
890-5414-7	E-SW	Total/NA	Solid	8021B	64149
890-5414-8	W-SW	Total/NA	Solid	8021B	64149
MB 880-64149/5-A	Method Blank	Total/NA	Solid	8021B	64149
LCS 880-64149/1-A	Lab Control Sample	Total/NA	Solid	8021B	64149
LCSD 880-64149/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	64149
890-5414-1 MS	N-FS	Total/NA	Solid	8021B	64149
890-5414-1 MSD	N-FS	Total/NA	Solid	8021B	64149

Analysis Batch: 64607

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5414-1	N-FS	Total/NA	Solid	Total BTEX	
890-5414-2	S-FS	Total/NA	Solid	Total BTEX	
890-5414-3	E-FS	Total/NA	Solid	Total BTEX	
890-5414-4	W-FS	Total/NA	Solid	Total BTEX	
890-5414-5	N-SW	Total/NA	Solid	Total BTEX	
890-5414-6	S-SW	Total/NA	Solid	Total BTEX	
890-5414-7	E-SW	Total/NA	Solid	Total BTEX	
890-5414-8	W-SW	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 64055

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5414-1	N-FS	Total/NA	Solid	8015NM Prep	
890-5414-2	S-FS	Total/NA	Solid	8015NM Prep	
890-5414-3	E-FS	Total/NA	Solid	8015NM Prep	
890-5414-4	W-FS	Total/NA	Solid	8015NM Prep	
890-5414-5	N-SW	Total/NA	Solid	8015NM Prep	
890-5414-6	S-SW	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: TEX MACK

Job ID: 890-5414-1
SDG: AR 207079

GC Semi VOA (Continued)

Prep Batch: 64055 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5414-7	E-SW	Total/NA	Solid	8015NM Prep	
890-5414-8	W-SW	Total/NA	Solid	8015NM Prep	
MB 880-64055/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-64055/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-64055/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 64187

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5414-1	N-FS	Total/NA	Solid	8015B NM	64055
890-5414-2	S-FS	Total/NA	Solid	8015B NM	64055
890-5414-3	E-FS	Total/NA	Solid	8015B NM	64055
890-5414-4	W-FS	Total/NA	Solid	8015B NM	64055
890-5414-5	N-SW	Total/NA	Solid	8015B NM	64055
890-5414-6	S-SW	Total/NA	Solid	8015B NM	64055
890-5414-7	E-SW	Total/NA	Solid	8015B NM	64055
890-5414-8	W-SW	Total/NA	Solid	8015B NM	64055
MB 880-64055/1-A	Method Blank	Total/NA	Solid	8015B NM	64055
LCS 880-64055/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	64055
LCSD 880-64055/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	64055

Analysis Batch: 64377

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5414-1	N-FS	Total/NA	Solid	8015 NM	
890-5414-2	S-FS	Total/NA	Solid	8015 NM	
890-5414-3	E-FS	Total/NA	Solid	8015 NM	
890-5414-4	W-FS	Total/NA	Solid	8015 NM	
890-5414-5	N-SW	Total/NA	Solid	8015 NM	
890-5414-6	S-SW	Total/NA	Solid	8015 NM	
890-5414-7	E-SW	Total/NA	Solid	8015 NM	
890-5414-8	W-SW	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 64131

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5414-1	N-FS	Soluble	Solid	DI Leach	
890-5414-2	S-FS	Soluble	Solid	DI Leach	
890-5414-3	E-FS	Soluble	Solid	DI Leach	
890-5414-4	W-FS	Soluble	Solid	DI Leach	
890-5414-5	N-SW	Soluble	Solid	DI Leach	
890-5414-6	S-SW	Soluble	Solid	DI Leach	
890-5414-7	E-SW	Soluble	Solid	DI Leach	
890-5414-8	W-SW	Soluble	Solid	DI Leach	
MB 880-64131/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-64131/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-64131/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 64310

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5414-1	N-FS	Soluble	Solid	300.0	64131
890-5414-2	S-FS	Soluble	Solid	300.0	64131

QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: TEX MACK

Job ID: 890-5414-1
SDG: AR 207079

HPLC/IC (Continued)

Analysis Batch: 64310 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5414-3	E-FS	Soluble	Solid	300.0	64131
890-5414-4	W-FS	Soluble	Solid	300.0	64131
890-5414-5	N-SW	Soluble	Solid	300.0	64131
890-5414-6	S-SW	Soluble	Solid	300.0	64131
890-5414-7	E-SW	Soluble	Solid	300.0	64131
890-5414-8	W-SW	Soluble	Solid	300.0	64131
MB 880-64131/1-A	Method Blank	Soluble	Solid	300.0	64131
LCS 880-64131/2-A	Lab Control Sample	Soluble	Solid	300.0	64131
LCSD 880-64131/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	64131

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: TEX MACK

Job ID: 890-5414-1
SDG: AR 207079

Client Sample ID: N-FS
Date Collected: 10/04/23 16:10
Date Received: 10/05/23 08:08

Lab Sample ID: 890-5414-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	64149	10/06/23 15:31	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64401	10/11/23 12:06	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64607	10/11/23 12:06	SM	EET MID
Total/NA	Analysis	8015 NM		1			64377	10/09/23 15:39	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	64055	10/06/23 13:53	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64187	10/09/23 15:39	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	64131	10/06/23 12:06	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	64310	10/10/23 00:15	CH	EET MID

Client Sample ID: S-FS
Date Collected: 10/04/23 15:20
Date Received: 10/05/23 08:08

Lab Sample ID: 890-5414-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	64149	10/06/23 15:31	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64401	10/11/23 12:32	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64607	10/11/23 12:32	SM	EET MID
Total/NA	Analysis	8015 NM		1			64377	10/09/23 16:23	SM	EET MID
Total/NA	Prep	8015NM Prep			9.94 g	10 mL	64055	10/06/23 13:53	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64187	10/09/23 16:23	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	64131	10/06/23 12:06	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	64310	10/10/23 00:21	CH	EET MID

Client Sample ID: E-FS
Date Collected: 10/04/23 14:21
Date Received: 10/05/23 08:08

Lab Sample ID: 890-5414-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	64149	10/06/23 15:31	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64401	10/11/23 12:58	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64607	10/11/23 12:58	SM	EET MID
Total/NA	Analysis	8015 NM		1			64377	10/09/23 16:45	SM	EET MID
Total/NA	Prep	8015NM Prep			9.97 g	10 mL	64055	10/06/23 13:53	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64187	10/09/23 16:45	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	64131	10/06/23 12:06	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	64310	10/10/23 00:41	CH	EET MID

Client Sample ID: W-FS
Date Collected: 10/04/23 14:02
Date Received: 10/05/23 08:08

Lab Sample ID: 890-5414-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	64149	10/06/23 15:31	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64401	10/11/23 13:24	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64607	10/11/23 13:24	SM	EET MID

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: TEX MACK

Job ID: 890-5414-1
SDG: AR 207079

Client Sample ID: W-FS
Date Collected: 10/04/23 14:02
Date Received: 10/05/23 08:08

Lab Sample ID: 890-5414-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			64377	10/09/23 17:07	SM	EET MID
Total/NA	Prep	8015NM Prep			9.90 g	10 mL	64055	10/06/23 13:53	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64187	10/09/23 17:07	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	64131	10/06/23 12:06	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	64310	10/10/23 00:48	CH	EET MID

Client Sample ID: N-SW
Date Collected: 10/04/23 12:18
Date Received: 10/05/23 08:08

Lab Sample ID: 890-5414-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	64149	10/06/23 15:31	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64401	10/11/23 13:50	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64607	10/11/23 13:50	SM	EET MID
Total/NA	Analysis	8015 NM		1			64377	10/09/23 17:30	SM	EET MID
Total/NA	Prep	8015NM Prep			9.93 g	10 mL	64055	10/06/23 13:53	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64187	10/09/23 17:30	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	64131	10/06/23 12:06	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	64310	10/10/23 00:55	CH	EET MID

Client Sample ID: S-SW
Date Collected: 10/04/23 13:09
Date Received: 10/05/23 08:08

Lab Sample ID: 890-5414-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	64149	10/06/23 15:31	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64401	10/11/23 14:16	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64607	10/11/23 14:16	SM	EET MID
Total/NA	Analysis	8015 NM		1			64377	10/09/23 17:52	SM	EET MID
Total/NA	Prep	8015NM Prep			10.06 g	10 mL	64055	10/06/23 13:53	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64187	10/09/23 17:52	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	64131	10/06/23 12:06	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	64310	10/10/23 01:01	CH	EET MID

Client Sample ID: E-SW
Date Collected: 10/04/23 13:45
Date Received: 10/05/23 08:08

Lab Sample ID: 890-5414-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	64149	10/06/23 15:31	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64401	10/11/23 14:42	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64607	10/11/23 14:42	SM	EET MID
Total/NA	Analysis	8015 NM		1			64377	10/09/23 18:14	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	64055	10/06/23 13:53	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64187	10/09/23 18:14	SM	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: TEX MACK

Job ID: 890-5414-1
SDG: AR 207079

Client Sample ID: E-SW

Lab Sample ID: 890-5414-7

Date Collected: 10/04/23 13:45
Matrix: Solid
Date Received: 10/05/23 08:08

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.02 g	50 mL	64131	10/06/23 12:06	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	64310	10/10/23 01:08	CH	EET MID

Client Sample ID: W-SW

Lab Sample ID: 890-5414-8

Date Collected: 10/04/23 13:31
Matrix: Solid
Date Received: 10/05/23 08:08

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	64149	10/06/23 15:31	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	64401	10/11/23 15:08	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			64607	10/11/23 15:08	SM	EET MID
Total/NA	Analysis	8015 NM		1			64377	10/09/23 18:35	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	64055	10/06/23 13:53	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	64187	10/09/23 18:35	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	64131	10/06/23 12:06	AG	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	64310	10/10/23 01:15	CH	EET MID

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: TEX MACK

Job ID: 890-5414-1
SDG: AR 207079

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: TEX MACK

Job ID: 890-5414-1
SDG: AR 207079

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	EPA	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: TEX MACK

Job ID: 890-5414-1
SDG: AR 207079

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-5414-1	N-FS	Solid	10/04/23 16:10	10/05/23 08:08	4.5'
890-5414-2	S-FS	Solid	10/04/23 15:20	10/05/23 08:08	4.5'
890-5414-3	E-FS	Solid	10/04/23 14:21	10/05/23 08:08	4.5'
890-5414-4	W-FS	Solid	10/04/23 14:02	10/05/23 08:08	4.5'
890-5414-5	N-SW	Solid	10/04/23 12:18	10/05/23 08:08	2.5'-3.5
890-5414-6	S-SW	Solid	10/04/23 13:09	10/05/23 08:08	2.5'-3.5
890-5414-7	E-SW	Solid	10/04/23 13:45	10/05/23 08:08	2.5'-3.5
890-5414-8	W-SW	Solid	10/04/23 13:31	10/05/23 08:08	2.5'-3.5

Chain of Custody

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Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300
Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

Work Order No: _____

www.xenco.com Page _____ of _____

Project Manager:	Joseph Guesnier	Bill to: (if different)	
Company Name:	Terracon	Company Name:	Spur
Address:	4518 W. Pierce St	Address:	
City, State ZIP:	Carlsbad NM, 88220	City, State ZIP:	
Phone:	(806)-300-0140	Email:	Gus.Sanchez@Terracon.com; Travis.Casey@Terracon.com; Joseph.Guesnier@Terracon.com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Tex Mack	Turn Around	☑ Routine ☐ Rush
Project Number:	AR 207079	Due Date:	
Project Location:		TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Gus Sanchez		
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	Yes No
Samples Received Intact:	(Yes) No	Thermometer ID:	TNM007
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	-1.4
Total Containers:		Corrected Temperature:	-1.2

ANALYSIS REQUEST

Pres. Code

Parameters: Chloride (EPA 300); BTEX (8021 B); TPH (8015)

890-5414 Chain of Custody

Preservative Codes

None: NO; DI Water: H_2O; Cool: Cool; MeOH: Me; HCL: HC; HNO_3: HN; H_2SO_4: H_2; NaOH: Na; H_3PO_4: HP; $NaHSO_4$: NABIS; $Na_2S_2O_3$: $NaSO_3$; Zn Acetate+NaOH: Zn; NaOH+Ascorbic Acid: SAPC

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Chloride (EPA 300)	BTEX (8021 B)	TPH (8015)	Sample Comments
N - FS	Soil	10-04-23	16:10	4.5'	Comp	1	✓	✓	✓	
S - FS			15:20	4.5'	Comp	1	✓	✓	✓	
E - FS			14:21	4.5'	Comp	1	✓	✓	✓	
W - FS			14:02	4.5'	Comp	1	✓	✓	✓	
N - SW	Soil	10-04-23	12:18	2.5-3.5	Comp	1	✓	✓	✓	
S - SW			13:09	2.5-3.5	Comp	1	✓	✓	✓	
E - SW			13:45	~~2.5~~ 2.5-3.5	Comp	1	✓	✓	✓	depth : 2.5-3.5'
W - SW			13:31	2.5-3.5	Comp	1	✓	✓	✓	

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn

Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of $85.00 will be applied to each project and a charge of $5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		10/5 8:08	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 890-5414-1
SDG Number: AR 207079

Login Number: 5414
List Number: 1
Creator: Bruns, Shannon

List Source: Eurofins Carlsbad

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	N/A	Refer to Job Narrative for details.
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 890-5414-1
SDG Number: AR 207079

Login Number: 5414
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 10/06/23 10:03 AM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

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12.16.2020

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

Reference: Eurofins Xenco, LLC Report No(s): **680913**
Tex Mack 118
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) 680913. 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. 680913 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 680913

Terracon-Lubbock, Lubbock, TX

Tex Mack 118

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
WS-(1.5-2)	S	12.10.2020 13:00	1.5 - 2 ft	680913-001
FS- (4.5-5)	S	12.10.2020 13:05	4.5 - 5 ft	680913-002

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CASE NARRATIVE

Client Name: Terracon-Lubbock

Project Name: Tex Mack 118

Project ID: *AR207079*
Work Order Number(s): *680913*

Report Date: *12.16.2020*
Date Received: *12.11.2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3144975 BTEX by EPA 8021B

Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected.
Samples affected are: 680977-001 S,680977-001 SD.

Batch: LBA-3145040 Chloride by EPA 300

Lab Sample ID 680923-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD).
Chloride recovered above QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference.
Samples in the analytical batch are: 680913-001, -002.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

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Certificate of Analytical Results 680913

Terracon-Lubbock, Lubbock, TX

Tex Mack 118

Sample Id: **WS-(1.5-2)** Matrix: Soil Date Received:12.11.2020 16:45

Lab Sample Id: 680913-001 Date Collected: 12.10.2020 13:00 Sample Depth: 1.5 - 2 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 12.15.2020 16:50 % Moisture:

Seq Number: 3145040 Basis: Wet Weight

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**6.75**	5.05	mg/kg	12.15.2020 18:39	X	1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 12.16.2020 10:35 % Moisture:

Seq Number: 3145078 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	12.15.2020 22:52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.15.2020 22:52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.15.2020 22:52	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	12.15.2020 22:52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-130	12.15.2020 22:52	
o-Terphenyl	84-15-1	87	%	70-130	12.15.2020 22:52	

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Certificate of Analytical Results 680913

Terracon-Lubbock, Lubbock, TX

Tex Mack 118

Sample Id: **WS-(1.5-2)**
Lab Sample Id: 680913-001

Matrix: Soil
Date Collected: 12.10.2020 13:00

Date Received:12.11.2020 16:45
Sample Depth: 1.5 - 2 ft

Analytical Method: BTEX by EPA 8021B
Tech: KTL
Analyst: KTL
Seq Number: 3144975

Date Prep: 12.15.2020 12:30

Prep Method: SW5035A
% Moisture:
Basis: Wet Weight
SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.15.2020 18:07	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.15.2020 18:07	U	1
Ethylbenzene	100-41-4	**0.00536**	0.00199	mg/kg	12.15.2020 18:07		1
m,p-Xylenes	179601-23-1	**0.0279**	0.00398	mg/kg	12.15.2020 18:07		1
o-Xylene	95-47-6	**0.00768**	0.00199	mg/kg	12.15.2020 18:07		1
Xylenes, Total	1330-20-7	**0.0356**	0.00199	mg/kg	12.15.2020 18:07		1
Total BTEX		**0.0409**	0.00199	mg/kg	12.15.2020 18:07		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	122	%	70-130	12.15.2020 18:07	
1,4-Difluorobenzene	540-36-3	92	%	70-130	12.15.2020 18:07	

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Certificate of Analytical Results 680913

Terracon-Lubbock, Lubbock, TX

Tex Mack 118

Sample Id: **FS- (4.5-5)** Matrix: Soil Date Received:12.11.2020 16:45

Lab Sample Id: 680913-002 Date Collected: 12.10.2020 13:05 Sample Depth: 4.5 - 5 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 12.15.2020 16:50 % Moisture:

Seq Number: 3145040 Basis: Wet Weight

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**13.5**	4.96	mg/kg	12.15.2020 18:55		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 12.16.2020 10:35 % Moisture:

Seq Number: 3145078 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	12.15.2020 23:56	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.15.2020 23:56	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.15.2020 23:56	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	12.15.2020 23:56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-130	12.15.2020 23:56	
o-Terphenyl	84-15-1	95	%	70-130	12.15.2020 23:56	

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Certificate of Analytical Results 680913

Terracon-Lubbock, Lubbock, TX

Tex Mack 118

Sample Id:	**FS- (4.5-5)**	Matrix:	Soil	Date Received:	12.11.2020 16:45
Lab Sample Id:	680913-002	Date Collected:	12.10.2020 13:05	Sample Depth:	4.5 - 5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	12.15.2020 12:30	% Moisture:	
Seq Number:	3144975			Basis:	Wet Weight
				SUB:	T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	12.15.2020 18:28	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	12.15.2020 18:28	U	1
Ethylbenzene	100-41-4	**0.00276**	0.00202	mg/kg	12.15.2020 18:28		1
m,p-Xylenes	179601-23-1	**0.0144**	0.00403	mg/kg	12.15.2020 18:28		1
o-Xylene	95-47-6	**0.00432**	0.00202	mg/kg	12.15.2020 18:28		1
Xylenes, Total	1330-20-7	**0.0187**	0.00202	mg/kg	12.15.2020 18:28		1
Total BTEX		**0.0215**	0.00202	mg/kg	12.15.2020 18:28		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	113	%	70-130	12.15.2020 18:28	
1,4-Difluorobenzene	540-36-3	97	%	70-130	12.15.2020 18:28	

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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 680913

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Terracon-Lubbock

Tex Mack 118

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3145040 — Matrix: Solid — Date Prep: 12.15.2020
MB Sample Id: 7717197-1-BLK — LCS Sample Id: 7717197-1-BKS — LCSD Sample Id: 7717197-1-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	260	104	259	104	90-110	0	20	mg/kg	12.15.2020 18:29	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3145040 — Matrix: Soil — Date Prep: 12.15.2020
Parent Sample Id: 680913-001 — MS Sample Id: 680913-001 S — MSD Sample Id: 680913-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	6.75	253	291	112	279	108	90-110	4	20	mg/kg	12.15.2020 18:45	X

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3145040 — Matrix: Soil — Date Prep: 12.15.2020
Parent Sample Id: 680923-001 — MS Sample Id: 680923-001 S — MSD Sample Id: 680923-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	247	1250	1600	108	1580	107	90-110	1	20	mg/kg	12.15.2020 19:57	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3145078 — Matrix: Solid — Date Prep: 12.16.2020
MB Sample Id: 7717219-1-BLK — LCS Sample Id: 7717219-1-BKS — LCSD Sample Id: 7717219-1-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	945	95	949	95	70-130	0	20	mg/kg	12.15.2020 22:08	
Diesel Range Organics (DRO)	<50.0	1000	973	97	950	95	70-130	2	20	mg/kg	12.15.2020 22:08	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	93		100		97		70-130	%	12.15.2020 22:08
o-Terphenyl	97		96		96		70-130	%	12.15.2020 22:08

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3145078 — Matrix: Solid — Date Prep: 12.16.2020
MB Sample Id: 7717219-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	12.15.2020 21:46	

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

QC Summary 680913

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Terracon-Lubbock

Tex Mack 118

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3145078 Matrix: Soil Date Prep: 12.16.2020
Parent Sample Id: 680913-001 MS Sample Id: 680913-001 S MSD Sample Id: 680913-001 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	1050	105	1100	110	70-130	5	20	mg/kg	12.15.2020 23:13	
Diesel Range Organics (DRO)	<49.9	997	1060	106	1170	117	70-130	10	20	mg/kg	12.15.2020 23:13	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	96		103		70-130	%	12.15.2020 23:13
o-Terphenyl	88		102		70-130	%	12.15.2020 23:13

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3144975 Matrix: Solid Date Prep: 12.15.2020
MB Sample Id: 7717155-1-BLK LCS Sample Id: 7717155-1-BKS LCSD Sample Id: 7717155-1-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	0.0743	74	0.0979	98	70-130	27	35	mg/kg	12.15.2020 11:00	
Toluene	<0.00200	0.100	0.0733	73	0.0900	90	70-130	20	35	mg/kg	12.15.2020 11:00	
Ethylbenzene	<0.00200	0.100	0.0885	89	0.100	100	70-130	12	35	mg/kg	12.15.2020 11:00	
m,p-Xylenes	<0.00400	0.200	0.175	88	0.198	99	70-130	12	35	mg/kg	12.15.2020 11:00	
o-Xylene	<0.00200	0.100	0.0887	89	0.0994	99	70-130	11	35	mg/kg	12.15.2020 11:00	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		103		104		70-130	%	12.15.2020 11:00
4-Bromofluorobenzene	109		103		103		70-130	%	12.15.2020 11:00

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3144975 Matrix: Soil Date Prep: 12.15.2020
Parent Sample Id: 680977-001 MS Sample Id: 680977-001 S MSD Sample Id: 680977-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	2.72	0.0990	1.39	0	1.36	0	70-130	2	35	mg/kg	12.15.2020 11:41	X
Toluene	3.46	0.0990	2.31	0	2.33	0	70-130	1	35	mg/kg	12.15.2020 11:41	X
Ethylbenzene	0.448	0.0990	0.405	0	0.367	0	70-130	10	35	mg/kg	12.15.2020 11:41	X
m,p-Xylenes	0.858	0.198	0.836	0	0.761	0	70-130	9	35	mg/kg	12.15.2020 11:41	X
o-Xylene	0.299	0.0990	0.315	16	0.275	0	70-130	14	35	mg/kg	12.15.2020 11:41	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	129		125		70-130	%	12.15.2020 11:41
4-Bromofluorobenzene	133	**	131	**	70-130	%	12.15.2020 11:41

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

680913

CHAIN OF CUSTODY RECORD

Terracon

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

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

Project Number: AR207079
Project Name: Tex Mack 118

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE:

TEMP OF COOLER WHEN RECEIVED (°C): 1.2.4 / -4.8 / 4.3

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	12/10/2020	13:00	X		WS - (1.5-2)	1.5	2	X				X	X	X					
S	12/10/2020	13:05	X		FS - (4.5-5)	4.5	5	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:
	12-11-20	4:45	Holly Taylor	12/11/20	1645

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 : 74755

Date/Time: 12.14.2020
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.:
E-Mail: jessica.kramer@eurofinset.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
680913-001	S	WS-(1.5-2)	12.10.2020 13:00	SW8015MOD_NM	TPH by SW8015 Mod	12.15.2020	12.24.2020	JKR	PHCC10C28 PHCC28C3	
680913-001	S	WS-(1.5-2)	12.10.2020 13:00	SW8021B	BTEX by EPA 8021B	12.15.2020	12.24.2020	JKR	BR4FBZ BZ BZME EBZ	
680913-001	S	WS-(1.5-2)	12.10.2020 13:00	E300_CL	Chloride by EPA 300	12.15.2020	01.07.2021	JKR	CL	
680913-002	S	FS- (4.5-5)	12.10.2020 13:05	SW8021B	BTEX by EPA 8021B	12.15.2020	12.24.2020	JKR	BR4FBZ BZ BZME EBZ	
680913-002	S	FS- (4.5-5)	12.10.2020 13:05	E300_CL	Chloride by EPA 300	12.15.2020	01.07.2021	JKR	CL	
680913-002	S	FS- (4.5-5)	12.10.2020 13:05	SW8015MOD_NM	TPH by SW8015 Mod	12.15.2020	12.24.2020	JKR	PHCC10C28 PHCC28C3	

Inter Office Shipment or Sample Comments:

Relinquished By: Teddy Randall Lee
Randall Lee

Date Relinquished: 12.14.2020

Received By: Jessica Kramer
Jessica Kramer

Date Received: 12.16.2020

Cooler Temperature: 2.9

Eurofins Xenco, LLC

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 74755

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

Sent By: Randall Lee **Date Sent:** 12.14.2020 11.42 AM

Received By: Jessica Kramer **Date Received:** 12.16.2020 09.10 AM

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	2.9	
#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: 12.16.2020

Jessica Kramer

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Terracon-Lubbock

Date/ Time Received: 12.11.2020 04.45.00 PM

Work Order #: 680913

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)?	-4.8	
#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**	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: 12.14.2020

Checklist reviewed by: Jessica Kramer
Jessica Kramer
Date: 12.15.2020

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

Standard of Care

Terracon's services were performed in a manner consistent with generally accepted practices of the profession undertaken in similar studies in the same geographical area during the same time. Terracon makes no warranties, either express or implied, regarding the findings, conclusions, or recommendations. Please note that Terracon does not warrant the work of laboratories, regulatory agencies, or other third parties supplying information used in the preparation of the report. These services were performed in accordance with the scope of work agreed with you, Spur Energy Partners LLC, as reflected in our Scope of Work Bid Request for incident number nRM2008551917.

Additional Scope Limitations

The development of this Amended Closure Report is based on information provided by Spur Energy Partners LLC, 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 Spur Energy Partners LLC. The data, interpretations, findings, and recommendations are based solely upon reformation executed within the scope of these services.

Reliance

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

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	nRM2008551917
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

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

Location of Release Source

Latitude 32.84568 Longitude -103.83940
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: TexMac 118	Site Type: Tank Battery
Date Release Discovered: 5/10/2020	API# *30-015-00192*

Unit Letter	Section	Township	Range	County
J	11	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) 0.1	Volume Recovered (bbls) 0
☒ Produced Water	Volume Released (bbls) 2.5	Volume Recovered (bbls) 0
	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)

A Hole in the bottom of a steel 2" flowline. 2 bbls of produced water was released. A secondary release occurred during the repair of the initial release, causing an additional .5 bbls of produced water to be released just north of the initial release.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	nRM2008551917
District RP	
Facility ID	
Application ID	

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

Initial Response

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

☒ The source of the release has been stopped.

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

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

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

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

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

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

Printed Name: Joseph Guesnier Title: Staff Scientist

Signature: Date: 7/19/2021

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

OCD Only

Received by: Date:

Incident ID	nRM2008551917
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	96 (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

Incident ID	nRM2008551917
District RP	
Facility ID	
Application ID	

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

Printed Name: Joseph Guesnier Title: Staff Scientist

Signature: Date: 7/19/2021

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

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

Incident ID	nRM2008551917
District RP	
Facility ID	
Application ID	

Remediation Plan

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

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

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

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

☐ Extents of contamination must be fully delineated.

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

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

Printed Name: Joseph Guesnier Title: Staff Scientist

Signature: Date: 7/19/2021

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:

Form C-141
Page 6

State of New Mexico
Oil Conservation Division

Incident ID	nRM2008551917
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: Joseph Guesnier Title: Staff Scientist

Signature: Date: 7/19/2021

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

OCD Only

Received by: Date:

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:

Closure Report

General Site Information:
Tex Mack 118 Release
NMOCD Reference No. nRM2008551917

Site Contact:
Braidy Moulder, Spur Energy Partners
920 Memorial City Way, Suite 1000, Houston, Texas 77024
(713) 264-2517

Depth to Ground Water
96 feet below grade surface

Distance to Nearest Surface Water
Laguna Plata (West-Central Lea County), approximately 16.25 miles to the south

Driving Directions
From Hwy 529, East on Hwy 82 2.04 mi, north on Lease Road 0.31 mi.,
Turn Northeast 1.68 mi on lease road, then West 30 feet to location.

Legal Description
Unit J, Section 11, T17S, R31E, Eddy County, New Mexico

July 22, 2021
Terracon Project No. AR207079

Prepared for:
Spur Energy Partners
Houston, Texas

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

July 22, 2021

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

Attn: Mr. Braidy Moulder
P: 713-264-2517
E: bmoulder@spurepllc.com

RE: **Closure Report**
TexMax 118 Release
Unit J, Section 11, T17S, R31E, Eddy County, New Mexico
Terracon Project No. AR207079

Dear Mr. Moulder,

Terracon Consultants, Inc. (Terracon) is pleased to submit our Closure Report for the site referenced above. The Closure Report was developed in accordance with the New Mexico Oil Conservation Division (NMOCD) regulations concerning clean-up actions required for releases of crude oil and produced water. The Closure Report presents a description of the release incident and OCD notification, site characteristics, potential receptors, and remedial actions required for the site. Terracon developed the Closure Report in general accordance with our Master Service Agreement dated April 29, 2019.

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

Sincerely,
Terracon Consultants, Inc.

Joseph Guesnier
Staff Scientist
Lubbock

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

Terracon

TABLE OF CONTENTS

Closure Report
Tex Mack 118 Release
Unit J Section 11, Township 17 South, Range 31 East
Eddy County, New Mexico
NMOCD Reference No. nRM2008551917
Terracon Project No. AR207079
July 22, 2021

1.0 SITE DESCRIPTION

The site is an approximate 0.15-acre tract of land within the Unit J Section 11, Township 17 South, Range 31 East, Eddy County, New Mexico (hereinafter, the site). The site consists primarily of undeveloped land except for an Oil Well to the west. A Topographic Map illustrating the site location is included in Figure 1 and a Site Map is included as Figure 2 in Appendix A.

2.0 SCOPE OF SERVICES

Terracon's scope of services is to investigate the magnitude and extent of the documented release, remediation, and restoration and develop a Closure Report in accordance with the NMOCD requirements that detail site closure activities to be completed. This Closure Report addresses the May 10, 2020 release of approximately 2 barrels (bbls) of produced water originating from a 2" steel flowline owned by Spur. The 2" flowline contained a hole at the bottom and a secondary release occurred during the repair of the initial release, causing an additional 0.5 bbls of produced water to be released just north of the initial release.

3.0 INTRODUCTION AND NOTIFICATION

A release of produced water occurred on May 10, 2020, at the site in Eddy County, New Mexico:

Required Information	Site and Release information	
Responsible party Local contact	The facility is operated by Spur Energy Partners LLC	
	Contact: Mr. Braidy Moulder	P: (281) 795-2286 E: bmoulder@spurepllc.com
NMOCD Notification	Notice of the release was provided to the NMOCD District 2 Artesia Office by Jerry Mathews (Spur) on May 10, 2020.	
Facility description	The facility is the Tex Mack 118 site in Eddy County, New Mexico. It is an approximate 0.15-acre well located within Unit J Section 11, Township 17 South, Range 31 East, Eddy County, New Mexico., approximately 7 miles west of Maljamar, New Mexico. The site is undeveloped.	

Required Information	Site and Release information	
Time of incident	May 10, 2020, discovered at 11:00 a.m.	
Discharge event	Release of produced water originating from a hole at the bottom of a 2" steel flowline and a secondary release occurred during the repair of the initial release, causing an additional 0.5 bbls of produced water to be released just north of the initial release. The release area, near the origin of the release, was limited to an approximately 1,450 sf area. The majority of the release is located within a pasture with portions extending to an adjacent road. The release is illustrated in Figure 2 of Appendix A	
Type of discharge	The documented fluids release occurred at the surface and appears to be surficial to depth.	
Quantity of spilled material	Total Fluids: 2.6 bbls	Produced Water: 2.6 bbls
Site characteristics	Relatively flat with drainage following the native ground surface; very gently sloping to the southwest.	
Immediate corrective actions	Valves were isolated to shut off the flow, and Terracon Remediation Construction Services (RCS) scraped up and stockpiled affected materials proximate to the release origin.	

4.0 INITIAL RESPONSE ACTIONS

4.1 Source Elimination and Site Security

Initial source elimination was accomplished by the Spur foreman isolating valves to shut off the flow. Terracon's remediation construction services (RCS) secured the site and performed containment and site stabilization activities. RCS consolidated and stockpiled affected soils proximate to the release origin, comprising an area measuring approximately 1,450-square-feet (sf). From this area, the affected materials stockpile totaled an estimated 268.5-cubic yards (cy). Following the consolidation of these materials, RCS fenced off the stockpile to deter inadvertent contact with the materials.

5.0 GENERAL SITE CHARACTERISTICS

Remediation Determining Information	Site Ranking Characteristics
Groundwater	POD Number: L-14207-POD3 Depth to Groundwater: 96 ft. bgs Distance to Well: 2.08 miles to the southeast Date Drilled: October 11, 2016
	Groundwater Quality: The well-referenced above, was originally drilled for use as a monitoring well.
Surface Water	Laguna Plata (West-Central Lea County), approximately 16.25 miles to the south.
Soil Characteristics	Soils at the site are mapped as Kermit-Berino fine sands, 0-3 percent slopes (KM), and form part of the Kermit Series. Kermit soils are on sandy plains with slopes of 0 to 12 percent. This soil has a surface layer of fine sand 0 to 12 inches, fine sand continues from 12 to 84 inches. Kermit series soils are categorized as very deep and excessively drained.
Karst Characterization	Terracon evaluated data from the NMOCD Public FTP Site, Karst map designations in reference to the site location. The site appears to be within a low-level Karst risk area. Based on on-site observations within the extent of the release margins, the potential for Karst formations in this specific area is of low potential. The site has a layer of solid competent rock from 60 to 120 inches bgs.
Depth of Remediation	The full extent of release quantities and excavation activities were not greater than 52 inches bgs.

6.0 SOIL REMEDIAL ACTION LEVELS

Crude oil facilities in New Mexico are generally regulated by the NMOCD. Terracon proposes to remediate produced water impacted soil of the Tex Mack 118 Release consistent with the remediation/abatement goals and objectives outlined in the New Mexico Oil Conservation Division (NMOCD) *Closure Criteria for Soils Impacted by a Release, June 21, 2018.*

The guidance document provides direction for initial response actions, site assessment, sampling procedures and provides closure criteria based on the depth to groundwater, distance to private and domestic water sources, and the distance to the nearest surface water body as follows:

6.1 Remediation Levels

Remediation limits for Chlorides, TPH (GRO+DRO+MRO), GRO+DRO, BTEX (includes benzene, toluene, ethylbenzene, and xylenes), and Benzene are selected based on *Restoration, Reclamation, and Re-vegetation* (19.15.29.13) NMAC – D (Reclamation of areas no longer in use) being 50 -100 feet:

Constituent	Remediation Limits
Chloride (Soils from the Surface to 4 ft. Below Grade Surface)	600 mg/kg
Chloride (Soils at Depths Greater than 4 ft. Below Grade Surface)	10,000 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 Exhibit 1 in Appendix B.

8.0 RELEASE INVESTIGATION DATA EVALUATION

During Terracon's May 14, 2020, May 18, 2021, and July 3, 2021 release investigation activities, a total of 24 soil samples were collected from the site and analyzed for BTEX, chloride, and/or TPH. All 24 soil samples were collected from the perimeter and within the release margins.

The release investigation activities in the year 2021 were collected following the denial of the remediation action plan submitted on May 28th, 2020.

8.1 Release Margins Data Evaluation

Benzene was detected above applicable laboratory SDLs in three of the 24 soil samples analyzed within the release margins. The Benzene concentration ranged from 0.238 mg/kg in soil sample HA-2 (0.5 to 1 ft bgs) to 19.9 mg/kg in soil sample HA-2 (0.5 to 1 ft bgs). Two of the 3 samples collected within the release margins did exhibit Benzene concentrations above NMOCD RAL for Benzene of 10 mg/kg, as summarized in Table 2.

Total BTEX was detected above applicable laboratory SDLs in four of the 24 soil samples analyzed within the release margins. Total BTEX concentrations ranged from 1.44 mg/kg in soil sample HA-2 (4.5 to 5 ft bgs) to 670 mg/kg in soil sample HA-2 (0.5 to 1 ft bgs). The detected Total BTEX concentrations in two of the 4 soil samples exceed the applicable NMOCD RAL for Total BTEX of 50 mg/kg, as summarized in Table 2.

Total TPH was detected above applicable laboratory SDLs in four of the 24 soil samples analyzed within the release margins. Total TPH concentrations ranged from 80.7 mg/kg in soil sample HA-1 (surface to 0.5 ft bgs) to 21,300 mg/kg in soil sample HA-2 (0 to 0.5 ft bgs). Three of the 4 samples collected within the release margins exhibited Total TPH concentrations above the NMOCD RAL of 100 mg/kg for Total TPH, as summarized in Table 2.

Chloride was detected above applicable laboratory SDLs in 17 of the 24 soil samples analyzed within the release margins. The Chloride concentrations ranged from 7.8 mg/kg in soil sample PS-2.1 (1.5 to 2.0 ft bgs) to 12,900 mg/kg in soil sample HA-2 (4.5 to 5 ft bgs). The samples analyzed within the release margins did exhibit chloride concentrations above the applicable NMOCD RAL for chloride of 600 mg/kg (soils from the Surface to 4 ft. Below Grade Surface) and a single exceedance above the NMOCD RAL for chloride of 10,000 mg/kg (Soils at Depths Greater than 4 ft. Below Grade Surface), as summarized in Table 2.

8.2 Release Investigation Data Summary

Based on the review of the above release investigation analytical results, the areas within the release margins exhibited chloride concentrations in multiple locations above NMOCD RALs. Based on these exceedances above NMOCD RALs, Sections 9.0 and subsequent detail recommended remedial response actions were implemented at the site.

8.3 Confirmation Margins Data Evaluation

During Terracon's confirmation sampling on December 10, 2020, composite soil samples were taken from the wall and floor of the open excavation, post reclamation activities. Resulting in two total soil samples being collected from the site and analyzed for BTEX, chloride, and TPH.

8.3.1 Confirmation Assessment Data Evaluation

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

Total BTEX was detected above the applicable laboratory SDL the two confirmation soil samples taken within the remediated margins. BTEX concentrations ranged from 0.0215 mg/kg in soil sample FS (4.5 to 5 ft. bgs) to 0.0409 mg/kg in soil sample WS (1.5 to 2 ft bgs). The detected

Total BTEX concentrations did not exceed the applicable NMOCD RAL for BTEX of 50 mg/kg, as summarized in Table 2.

Total TPH was not detected above applicable laboratory SDLs in the confirmation soil samples analyzed within the remediated margins. Therefore, the Total TPH concentrations did not exceed the applicable NMOCD RAL of 100 mg/kg for Total TPH, as summarized in Table 2.

Chloride was detected above applicable laboratory SDLs in the two confirmation samples analyzed within the remediated margins. The chloride concentrations ranged from 6.75 mg/kg in soil sample WS (1.5 to 2 ft bgs) to 13.5 mg/kg in soil sample FS (4.5 to 5 ft bgs). The samples analyzed within the release margins did not exhibit chloride concentrations above the applicable NMOCD RAL for chloride of 600 mg/kg, as summarized in Table 2.

8.3.2 Confirmation Data Summary

Based on the review of the above confirmation analytical results, the areas within and surrounding the remediation do not exhibit concentrations above the NMOCD RAL for benzene, Total BTEX, chloride, and Total TPH. Based on these results below NMOCD RALs, Sections 9.0 and subsequent detail the closure of response actions that were implemented at the site. Terracon has completed the restoration of the above-mentioned site and has disposed of the stockpiled material.

9.0 SOIL REMEDIATION

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

9.1 Contaminated Soils

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

- Impacted soils within the release margins, illustrated in Figure 2 of Appendix A, were excavated to a maximum depth of 4.5 feet bgs, and field evidence demonstrated that impacted materials have been sufficiently mitigated, whichever occurs first.
- Following excavation, vertical and horizontal delineation samples were collected from the base and walls of the excavation to confirm the remaining levels of soil contaminants are below the desired NMOCD RALs.

9.2 Soil Management

The selected method of soil management is removal and disposal at an NMOCD-approved facility. Excavated soils, which have previously been stockpiled on site, was transported by truck (20 cubic yard capacity) and disposed of at the Lea Land dump facility operated by Lea Land, LLC. located in Hobbs, New Mexico.

10.0 TERMINATION OF REMEDIAL ACTIONS, FINAL CLOSURE AND REPORTING

10.1 Termination of Remedial Action

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

10.2 Final Closure

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

10.3 Final Report

Following completion of remedial activities, a final report summarizing actions taken to mitigate environmental damage related to the release has been provided to NMOCD for approval.

APPENDIX A – FIGURES

Figure 1 – Topographic Map

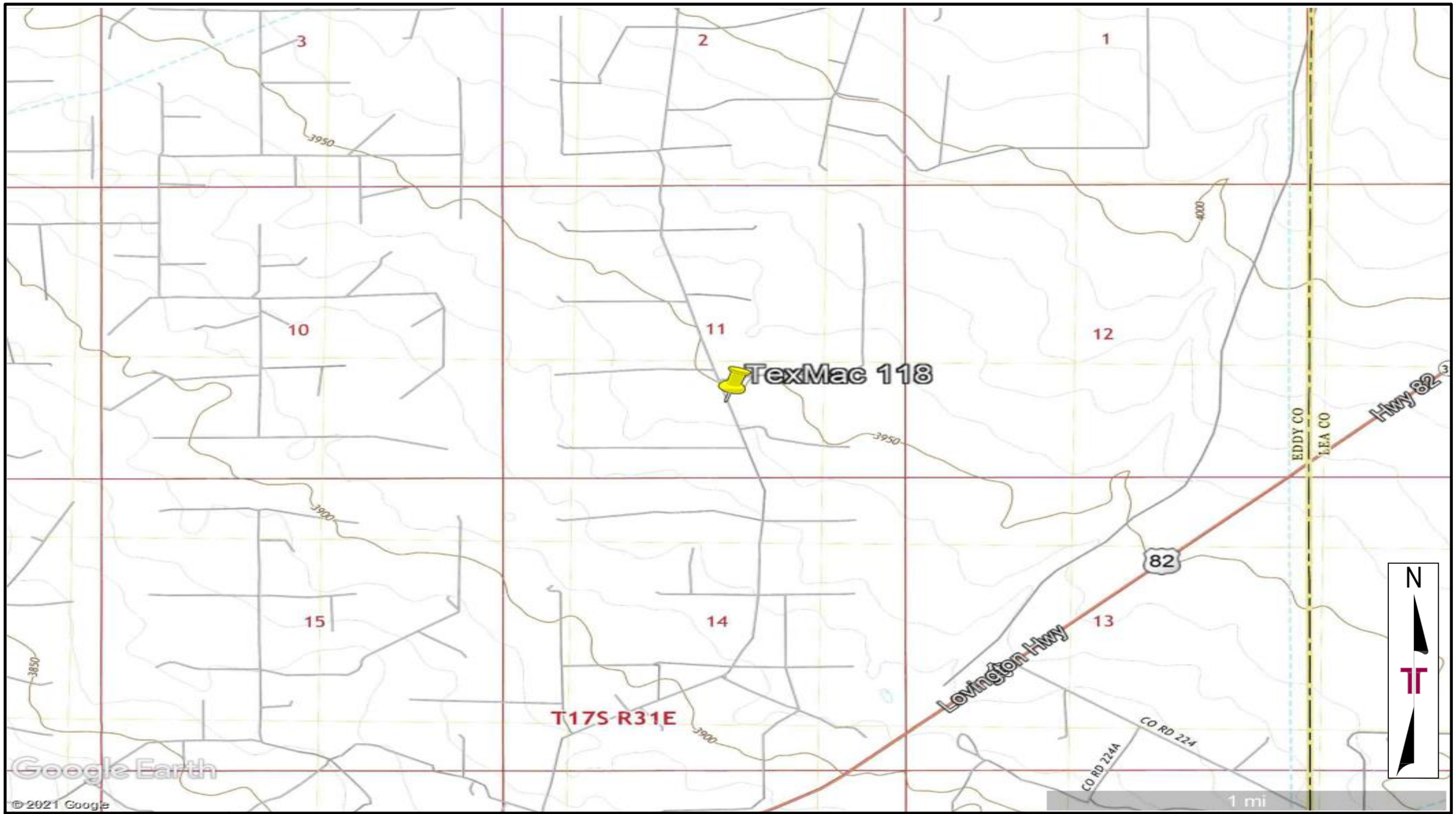
Figure 2 – Site Map

Figure 3 – Contamination Concentration Map

Figure 4 – Remediation Concentration Map

Figure 5 – NMOSE POD Location Map

Figure 6 – Cave Karst Public UCP



Project No.	AR207079
Scale:	As Shown
Source:	Google Earth
Image Date:	01/08/2020

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

Figure 1 – Topographical Map

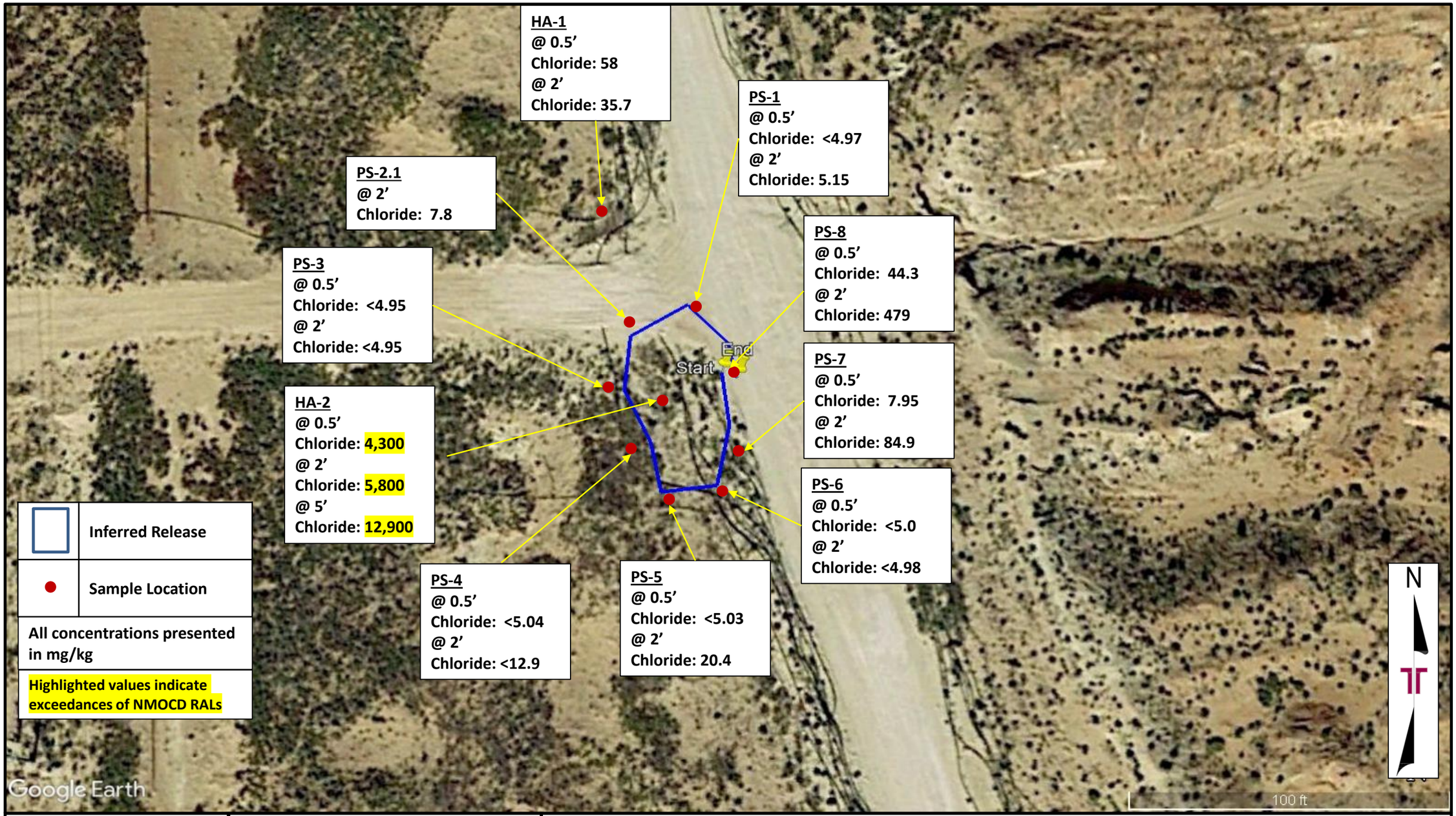
TexMac 118
32.84568°, -103.8394°
Eddy County, New Mexico

Project No.	AR207079
Scale:	As Shown
Source:	Google Earth
Image Date:	11/2/2017

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

Figure 2 – Site Map

TexMack 118
32.84568°, -103.8394°
Eddy County, New Mexico

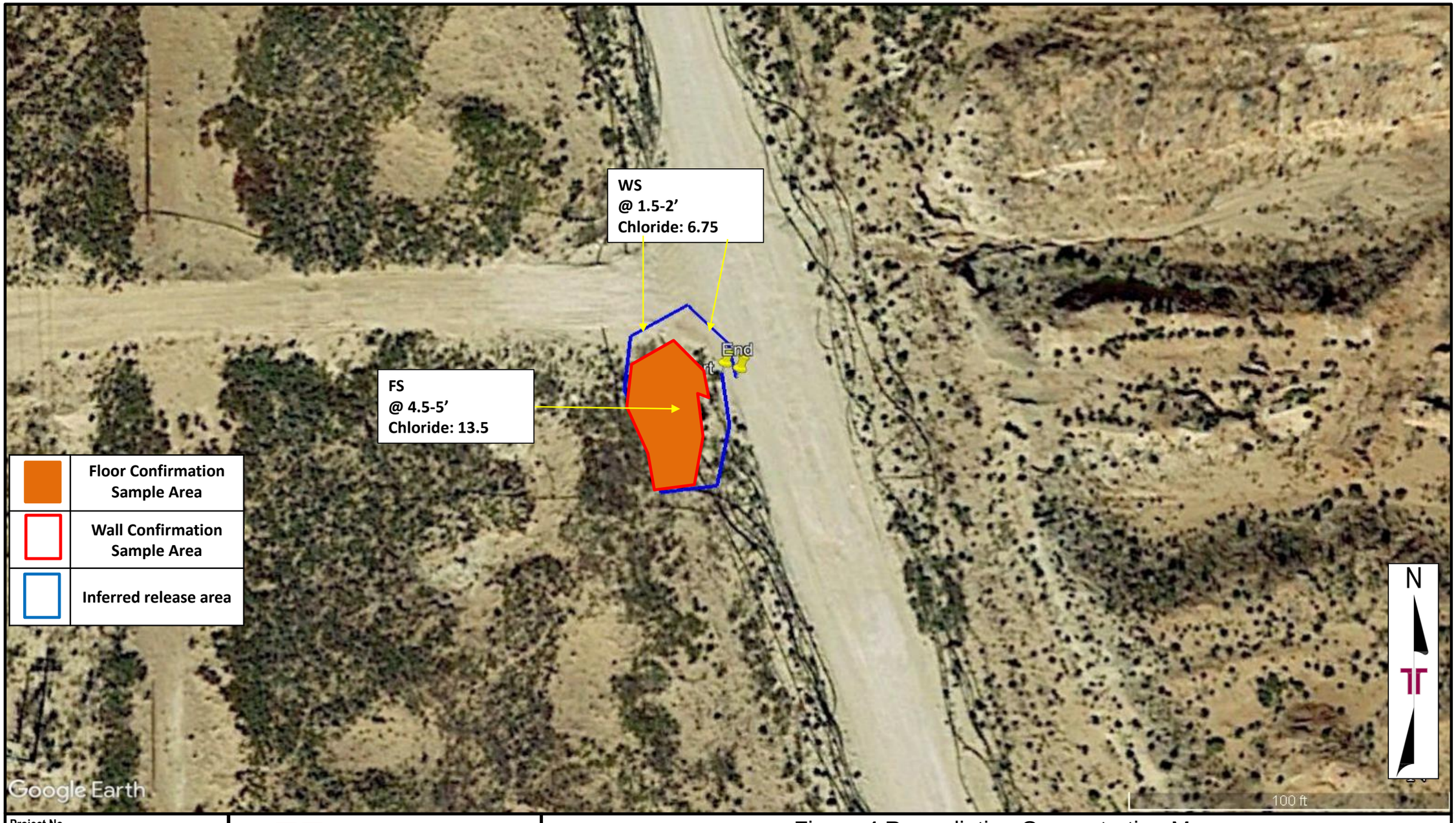


Project No.	AR207079
Scale:	As Shown
Source:	Google Earth
Image Date:	11/2/2017

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

Figure 3 – Chlorine Contamination Concentration Map

TexMack 118
32.84568°, -103.8394°
Eddy County, New Mexico



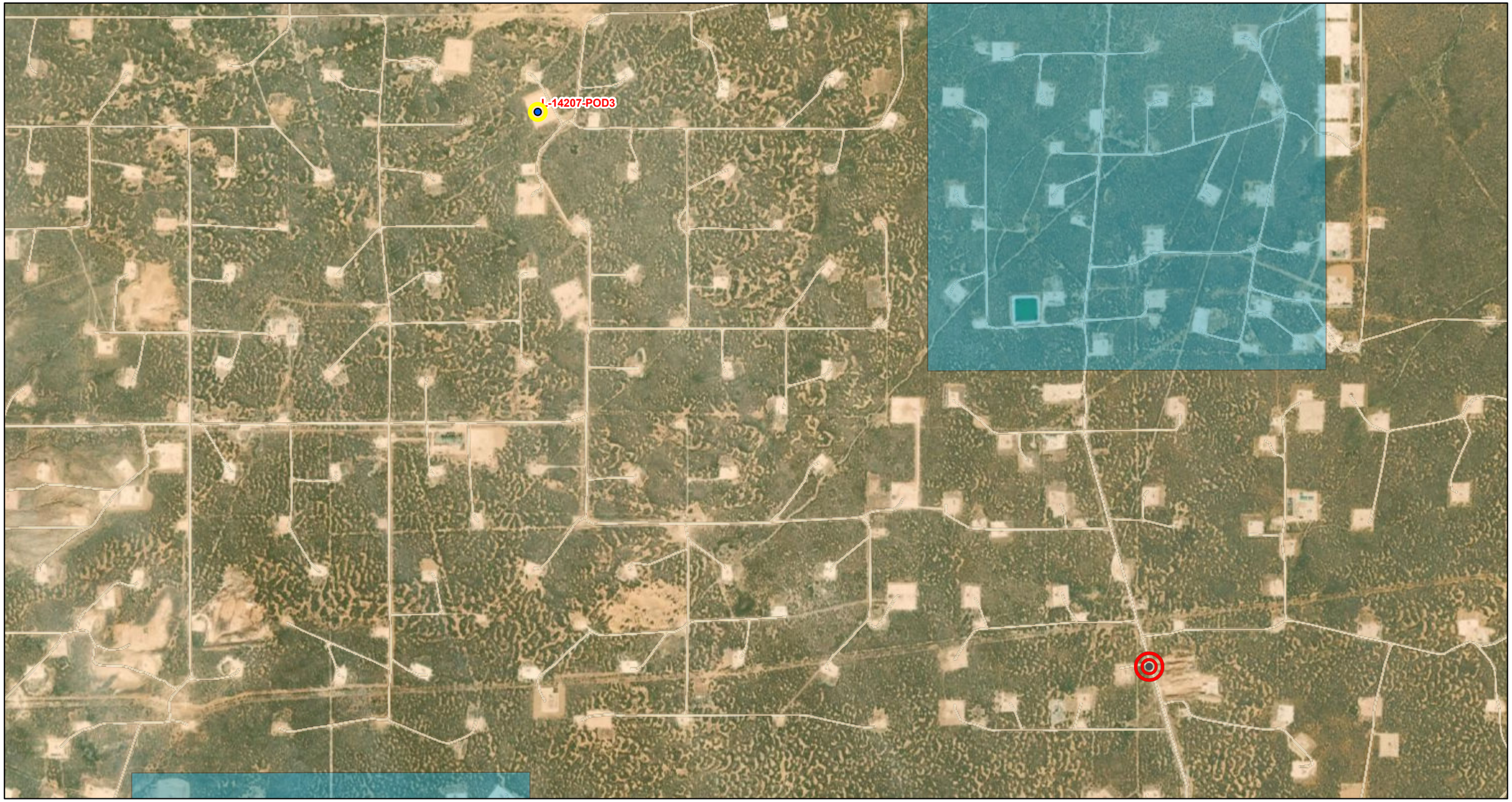
Project No.	AR207079
Scale:	As Shown
Source:	Google Earth
Image Date:	11/2/2017

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

Figure 4 Remediation Concentration Map

TexMack 118
32.84568°, -103.8394°
Eddy County, New Mexico

Figure 5 – NMOSE Pod Location Map



3/9/2021, 3:53:37 PM

Override 1

GIS WATERS PODs

Active

New Mexico State Trust Lands

Both Estates

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

Project No.	AR207079
Scale:	As Shown
Source:	USGS
Date:	2017

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

Figure 6 – Cave Karst Public UCP Map

TexMack 118 Release
32.84568 °, -103.8394°
Eddy County, New Mexico

APPENDIX B – TABLES & PROCEDURES

Exhibit 1 – Soil Sampling Procedures
Table 1 – Closure Criteria for Soils Impacted by a Release
Table 2 – Soil Sample Analytical Results

EXHIBIT 1

SOIL SAMPLING PROCEDURES

Soil Sampling Procedures

Soil sampling for laboratory analysis was conducted according to NMOCD-approved industry standards or other NMOCD-approved procedures. Accepted NMOCD soil sampling procedures and laboratory analytical methods are as follows:

- Collect samples in clean, air-tight glass jars supplied by the laboratory which will conduct the analysis, or from a reliable laboratory equipment supplier.
- Label the samples with a unique code for each sample.
- Cool and store samples with cold packs or on ice.
- Promptly ship the 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

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

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

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

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS - BTEX[1], Chloride[2], and TPH[3]
Tex Mack 118
Terracon Project No. AR207079

Sample I.D.	Sample Depth (bgs)	Sample Type	Sample Date	BTEX (mg/kg)	Chloride (mg/kg)	TPH (8015M) (mg/kg)			
						GRO	DRO	ORO	TOTAL
Release Margin Samples									
HA-1 (0-0.5)	0 - 0.5'	Grab	05/14/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	58	14.2	52.3	14.2	80.7
HA-1 (1.5-2)	1.5 - 2	Grab	05/14/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	35.7	ND	ND	ND	ND
HA-1 (4.5-5)	4.5-5'	Grab	05/14/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	2,440	ND	ND	ND	ND
HA-2 (0-0.5)	0 - 0.5'	Grab	05/14/20	Benzene - **19** Toluene - 193 Ethylbenzene - 171 Total Xylenes - 178 Total BTEX - **561**	**4,300**	4,820	14,700	1,770	**21,300**
HA-2 (0.5-1)	0.5 -1'	Grab	05/14/20	Benzene - **19.9** Toluene - 232 Ethylbenzene - 206 Total Xylenes - 212 Total BTEX - **670**	NA	NA	NA	NA	NA
HA-2 (1.5-2)	1.5 - 2'	Grab	05/14/20	Benzene - 0.238 Toluene - 8.71 Ethylbenzene - 13.6 Total Xylenes - 15.6 Total BTEX - 38.2	**5,880**	101	1,280	215	**1,600**
HA-2 (4.5-5)	4.5-5'	Grab	05/14/20	Benzene - ND Toluene - ND Ethylbenzene - 0.531 Total Xylenes - 0.911 Total BTEX - 1.44	**12,900**	30.8	211	56	298
Supplemental Investigation Samples									
PS-1 (0-0.5)	0 - 0.5'	Grab	05/18/21	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	ND	ND	ND	ND	ND
PS-1 (1.5-2)	1.5-2'	Grab	05/18/21	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	5.15	ND	ND	ND	ND
PS-2 (0-0.5)	0 - 0.5'	Grab	05/18/21	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	477	ND	ND	ND	ND
PS-2 (1.5-2)	1.5-2'	Grab	05/18/21	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	**1,100**	ND	ND	ND	ND
PS-3 (0-0.5)	0 - 0.5'	Grab	05/18/21	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	ND	ND	ND	ND	ND
PS-3 (1.5-2)	1.5-2'	Grab	05/18/21	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	ND	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**
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/ORO)
* = NMOCD Remediation and Delineation Standards are proposed in 19.15.29.12 NMAC - N, 8/14/2018
< = Constituent not detected above the indicated laboratory SDL
NA = Not Analyzed
N/A= No Applicable reporting standards
Bold denotes concentrations that exceed the New Mexico Oil Conservation Division (NMOCD) Remediation and Delineation Standards.

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS - BTEX[1], Chloride[2], and TPH[3]
Tex Mack 118
Terracon Project No. AR207079

Sample I.D.	Sample Depth (bgs)	Sample Type	Sample Date	BTEX (mg/kg)	Chloride (mg/kg)	TPH (8015M) (mg/kg)			
						GRO	DRO	ORO	TOTAL
Supplemental Investigation Samples									
PS-4 (0-0.5)	0 - 0.5'	Grab	05/18/21	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	ND	ND	ND	ND	ND
PS-4 (1.5-2)	1.5-2'	Grab	05/18/21	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	12.9	ND	ND	ND	ND
PS-5 (0-0.5)	0 - 0.5'	Grab	05/18/21	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	ND	ND	ND	ND	ND
PS-5 (1.5-2)	1.5-2'	Grab	05/18/21	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	20.4	ND	ND	ND	ND
PS-6 (0-0.5)	0 - 0.5'	Grab	05/18/21	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	ND	ND	ND	ND	ND
PS-6 (1.5-2)	1.5-2'	Grab	05/18/21	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	ND	ND	ND	ND	ND
PS-7 (0-0.5)	0 - 0.5'	Grab	05/18/21	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	7.95	ND	ND	ND	ND
PS-7 (1.5-2)	1.5-2'	Grab	05/18/21	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	84.9	ND	ND	ND	ND
PS-8 (0-0.5)	0 - 0.5'	Grab	05/18/21	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	44.3	ND	ND	ND	ND
PS-8 (1.5-2)	1.5-2'	Grab	05/18/21	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	479	ND	ND	ND	ND
PS-2.1 (1.5-2)	1.5-2'	Grab	06/03/21	Benzene - NA Toluene - NA Ethylbenzene - NA Total Xylenes - NA Total BTEX - NA	7.80	NA	NA	NA	NA
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**	**1,000**		**N/A**	**2,500**

1. BTEX = Benzene, toluene, ethylbenzene, total xylenes analyzed by EPA Method 8021B
2. Chloride = Chloride analyzed by EPA Method 300.
3. TPH = Total petroleum hydrocarbons analyzed by EPA Method 8015M (GRO/DRO/ORO)
* = NMOCD Remediation and Delineation Standards are proposed in 19.15.29.12 NMAC - N, 8/14/2018
< = Constituent not detected above the indicated laboratory SDL
NA = Not Analyzed
N/A= No Applicable reporting standards
Bold denotes concentrations that exceed the New Mexico Oil Conservation Division (NMOCD) Remediation and Delineation Standards.

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS - BTEX[1], Chloride[2], and TPH[3]
Tex Mack 118
Terracon Project No. AR207079

Sample I.D.	Sample Depth (bgs)	Sample Type	Sample Date	BTEX (mg/kg)	Chloride (mg/kg)	TPH (8015M) (mg/kg)			
						GRO	DRO	ORO	TOTAL
Confirmation Samples									
WS (1.5-2)	1.5-2'	Grab	12/10/20	Benzene - ND Toluene - ND Ethylbenzene - 0.536 Total Xylenes - 0.356 Total BTEX - 0.0409	6.75 X	ND	ND	ND	ND
FS(4.5-5)	4.5-5'	Grab	12/10/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - 0.0187 Total BTEX - 0.0215	13.5	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**	**1,000**		**N/A**	**2,500**
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/ORO)
* = NMOCD Remediation and Delineation Standards are proposed in 19.15.29.12 NMAC - N, 8/14/2018
< = Constituent not detected above the indicated laboratory SDL
NA = Not Analyzed
N/A= No Applicable reporting standards
Bold denotes concentrations that exceed the New Mexico Oil Conservation Division (NMOCD) Remediation and Delineation Standards.

APPENDIX C – PHOTOGRAPHIC LOG

PHOTO 1: View of sight, facing south. 4/30/2020

PHOTO 2: View of sight, facing north. 4/30/2020

PHOTO 3: View of sight, facing southwest. 4/30/2020

PHOTO 4: View of sight, facing southeast. 4/30/2020

PHOTO 5: View of remediation, facing south. 12/17/2020

APPENDIX D – ANALYTICAL REPORT AND CHAIN OF CUSTODY

Certificate of Analysis Summary 661946

Terracon-Lubbock, Lubbock, TX

Project Name: Tex Mack 118

Project Id: AR207079
Contact: Joseph Guesnier
Project Location: Client: Spur Energy Partners

Date Received in Lab: Mon 05.18.2020 14:20
Report Date: 06.02.2020 10:58
Project Manager: Jessica Kramer

Analysis Requested															
	Lab Id:	661946-001		661946-003		661946-005		661946-006		661946-007		661946-008			
	Field Id:	HA-1 (0-0.5)		HA-1 (1.5-2)		HA-1 (4.5-5)		HA-2 (0-0.5)		HA-2 (0.5-1)		HA-2 (1.5-2)			
	Depth:	0-0.5 ft		1.5-2 ft		4.5-5 ft		0-0.5 ft		0.5-1 ft		1.5-2 ft			
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL			
	Sampled:	05.14.2020 10:00		05.14.2020 10:10		05.14.2020 10:20		05.14.2020 10:25		05.14.2020 10:30		05.14.2020 10:35			
BTEX by EPA 8021B	***Extracted:***	05.20.2020 12:00		05.20.2020 12:00		05.20.2020 12:00		05.20.2020 12:00		05.28.2020 16:00		05.20.2020 12:00			
	Analyzed:	05.21.2020 13:58		05.21.2020 10:55		05.21.2020 14:22		05.21.2020 14:46		05.28.2020 22:33		05.21.2020 15:10			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Benzene		<0.00782	0.0173	<0.00850	0.0188	<0.00782	0.0173	19.0	1.74	19.9 X	0.992	0.238 J	0.396		
Toluene		<0.00405	0.0173	<0.00440	0.0188	<0.00405	0.0173	193	1.74	232 X	0.992	8.71	0.396		
Ethylbenzene		<0.00533	0.0173	<0.00579	0.0188	<0.00533	0.0173	171	1.74	206 X	0.992	13.6	0.396		
m,p-Xylenes		<0.00590	0.0346	<0.00641	0.0376	<0.00590	0.0346	121	3.48	144 X	1.98	10.1	0.792		
o-Xylene		<0.00590	0.0173	<0.00641	0.0188	<0.00590	0.0173	57.4	1.74	67.8 X	0.992	5.54	0.396		
Total Xylenes		<0.00590	0.0173	<0.00641	0.0188	<0.00590	0.0173	178	1.74	212	0.992	15.6	0.396		
Total BTEX		<0.00405	0.0173	<0.00440	0.0188	<0.00405	0.0173	561	1.74	670	0.992	38.2	0.396		
Chloride by EPA 300 **SUB: T104704215-19-30**	***Extracted:***	05.21.2020 09:12		05.21.2020 09:12		05.21.2020 09:12		05.21.2020 09:12				05.21.2020 09:12			
	Analyzed:	05.21.2020 23:32		05.21.2020 23:49		05.22.2020 00:39		05.22.2020 00:56				05.22.2020 01:13			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL			mg/kg	RL		
Chloride		58.0	10.0	35.7	9.84	2440	9.96	4300	9.98			5880 D	100		
TPH By SW8015 Mod **SUB: T104704215-19-30**	***Extracted:***	05.28.2020 13:29		05.28.2020 13:32		05.28.2020 13:35		05.28.2020 13:38				05.28.2020 13:41			
	Analyzed:	06.01.2020 11:32		05.31.2020 21:23		05.31.2020 21:43		05.29.2020 12:51				05.29.2020 13:31			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL			mg/kg	RL		
Gasoline Range Hydrocarbons (GRO)		14.2 J	49.7	<10.1	50.3	<9.94	49.7	4820	496			101	49.7		
Diesel Range Organics (DRO)		52.3	49.7	<10.1	50.3	<9.94	49.7	14700	496			1280	49.7		
Motor Oil Range Hydrocarbons (MRO)		14.2 J	49.7	<10.1	50.3	<9.94	49.7	1770	496			215	49.7		
Total TPH		80.7	49.7	<10.1	50.3	<9.94	49.7	21300	496			1600	49.7		

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

Jessica Kramer
Project Manager

Certificate of Analysis Summary 661946

Terracon-Lubbock, Lubbock, TX

Project Name: Tex Mack 118

Project Id: AR207079
Contact: Joseph Guesnier
Project Location: Client: Spur Energy Partners

Date Received in Lab: Mon 05.18.2020 14:20
Report Date: 06.02.2020 10:58
Project Manager: Jessica Kramer

Analysis Requested							
	Lab Id:	661946-010					
	Field Id:	HA-2 (4.5-5)					
	Depth:	4.5-5 ft					
	Matrix:	SOIL					
	Sampled:	05.14.2020 10:45					
BTEX by EPA 8021B	***Extracted:***	05.20.2020 12:00					
	Analyzed:	05.21.2020 15:34					
	Units/RL:	mg/kg	RL				
Benzene		<0.0429	0.0949				
Toluene		<0.0222	0.0949				
Ethylbenzene		0.531	0.0949				
m,p-Xylenes		0.588	0.190				
o-Xylene		0.323	0.0949				
Total Xylenes		0.911	0.0949				
Total BTEX		1.44	0.0949				
Chloride by EPA 300 **SUB: T104704215-19-30**	***Extracted:***	05.21.2020 09:12					
	Analyzed:	05.22.2020 01:30					
	Units/RL:	mg/kg	RL				
Chloride		12900	100				
TPH By SW8015 Mod **SUB: T104704215-19-30**	***Extracted:***	05.28.2020 13:44					
	Analyzed:	05.29.2020 13:31					
	Units/RL:	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		30.8 J	50.2				
Diesel Range Organics (DRO)		211	50.2				
Motor Oil Range Hydrocarbons (MRO)		56.0	50.2				
Total TPH		298	50.2				

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

Jessica Kramer
Project Manager

Analytical Report 661946

for

Terracon-Lubbock

Project Manager: Joseph Guesnier

Tex Mack 118

AR207079

06.02.2020

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)

06.02.2020

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

Reference: XENCO Report No(s): **661946**
Tex Mack 118
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) 661946. 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. 661946 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 661946

Terracon-Lubbock, Lubbock, TX

Tex Mack 118

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
HA-1 (0-0.5)	S	05.14.2020 10:00	0 - 0.5 ft	661946-001
HA-1 (1.5-2)	S	05.14.2020 10:10	1.5 - 2 ft	661946-003
HA-1 (4.5-5)	S	05.14.2020 10:20	4.5 - 5 ft	661946-005
HA-2 (0-0.5)	S	05.14.2020 10:25	0 - 0.5 ft	661946-006
HA-2 (0.5-1)	S	05.14.2020 10:30	0.5 - 1 ft	661946-007
HA-2 (1.5-2)	S	05.14.2020 10:35	1.5 - 2 ft	661946-008
HA-2 (4.5-5)	S	05.14.2020 10:45	4.5 - 5 ft	661946-010
HA-1 (0.5-1)	S	05.14.2020 10:05	0.5 - 1 ft	Not Analyzed
HA-1 (3.5-4)	S	05.14.2020 10:15	3.5 - 4 ft	Not Analyzed
HA-2 (3.5-4)	S	05.14.2020 10:40	3.5 - 4 ft	Not Analyzed

CASE NARRATIVE

Client Name: Terracon-Lubbock

Project Name: Tex Mack 118

Project ID: *AR207079*
Work Order Number(s): *661946*

Report Date: *06.02.2020*
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-3127458 TPH By SW8015 Mod

Surrogate 1-Chlorooctane recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 661946-006.

Matrix interference in surrog.: 661946-006. Analyzed at a dilution due to physical characteristics: dark color

Batch: LBA-3127540 BTEX by EPA 8021B

Lab Sample ID 661946-007 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 661946-007.
The Laboratory Control Sample for Toluene, Benzene, m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.

Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 661946-007 S,661946-007 SD,661946-007.

Certificate of Analytical Results 661946

Terracon-Lubbock, Lubbock, TX

Tex Mack 118

Sample Id:	**HA-1 (0-0.5)**	Matrix:	Soil	Date Received:	05.18.2020 14:20
Lab Sample Id:	661946-001	Date Collected:	05.14.2020 10:00	Sample Depth:	0 - 0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	05.21.2020 09:12	Basis:	Wet Weight
Seq Number:	3126693			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**58.0**	10.0	0.355	mg/kg	05.21.2020 23:32		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	SW8015P
Tech:	DRU			% Moisture:	
Analyst:	ISU	Date Prep:	05.28.2020 13:29	Basis:	Wet Weight
Seq Number:	3127458			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**14.2**	49.7	9.94	mg/kg	06.01.2020 11:32	J	1
Diesel Range Organics (DRO)	C10C28DRO	**52.3**	49.7	9.94	mg/kg	06.01.2020 11:32		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**14.2**	49.7	9.94	mg/kg	06.01.2020 11:32	J	1
Total TPH	PHC635	**80.7**	49.7	9.94	mg/kg	06.01.2020 11:32		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	06.01.2020 11:32	
o-Terphenyl	84-15-1	106	%	70-135	06.01.2020 11:32	

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Terracon-Lubbock, Lubbock, TX

Tex Mack 118

Sample Id:	**HA-1 (0-0.5)**	Matrix:	Soil	Date Received:	05.18.2020 14:20
Lab Sample Id:	661946-001	Date Collected:	05.14.2020 10:00	Sample Depth:	0 - 0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	05.20.2020 12:00	Basis:	Wet Weight
Seq Number:	3126777				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00782	0.0173	0.00782	mg/kg	05.21.2020 13:58	U	1
Toluene	108-88-3	<0.00405	0.0173	0.00405	mg/kg	05.21.2020 13:58	U	1
Ethylbenzene	100-41-4	<0.00533	0.0173	0.00533	mg/kg	05.21.2020 13:58	U	1
m,p-Xylenes	179601-23-1	<0.00590	0.0346	0.00590	mg/kg	05.21.2020 13:58	U	1
o-Xylene	95-47-6	<0.00590	0.0173	0.00590	mg/kg	05.21.2020 13:58	U	1
Total Xylenes	1330-20-7	<0.00590	0.0173	0.00590	mg/kg	05.21.2020 13:58	U	1
Total BTEX		<0.00405	0.0173	0.00405	mg/kg	05.21.2020 13:58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	85	%	68-120	05.21.2020 13:58	
a,a,a-Trifluorotoluene	98-08-8	93	%	71-121	05.21.2020 13:58	

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Terracon-Lubbock, Lubbock, TX

Tex Mack 118

Sample Id:	**HA-1 (1.5-2)**	Matrix:	Soil	Date Received:	05.18.2020 14:20
Lab Sample Id:	661946-003	Date Collected:	05.14.2020 10:10	Sample Depth:	1.5 - 2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	05.21.2020 09:12	Basis:	Wet Weight
Seq Number:	3126693			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**35.7**	9.84	0.348	mg/kg	05.21.2020 23:49		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	SW8015P
Tech:	DRU			% Moisture:	
Analyst:	ISU	Date Prep:	05.28.2020 13:32	Basis:	Wet Weight
Seq Number:	3127458			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<10.1	50.3	10.1	mg/kg	05.31.2020 21:23	U	1
Diesel Range Organics (DRO)	C10C28DRO	<10.1	50.3	10.1	mg/kg	05.31.2020 21:23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<10.1	50.3	10.1	mg/kg	05.31.2020 21:23	U	1
Total TPH	PHC635	<10.1	50.3	10.1	mg/kg	05.31.2020 21:23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	05.31.2020 21:23	
o-Terphenyl	84-15-1	94	%	70-135	05.31.2020 21:23	

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Terracon-Lubbock, Lubbock, TX

Tex Mack 118

Sample Id:	**HA-1 (1.5-2)**	Matrix:	Soil	Date Received:	05.18.2020 14:20
Lab Sample Id:	661946-003	Date Collected:	05.14.2020 10:10	Sample Depth:	1.5 - 2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	05.20.2020 12:00	Basis:	Wet Weight
Seq Number:	3126777				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00850	0.0188	0.00850	mg/kg	05.21.2020 10:55	U	1
Toluene	108-88-3	<0.00440	0.0188	0.00440	mg/kg	05.21.2020 10:55	U	1
Ethylbenzene	100-41-4	<0.00579	0.0188	0.00579	mg/kg	05.21.2020 10:55	U	1
m,p-Xylenes	179601-23-1	<0.00641	0.0376	0.00641	mg/kg	05.21.2020 10:55	U	1
o-Xylene	95-47-6	<0.00641	0.0188	0.00641	mg/kg	05.21.2020 10:55	U	1
Total Xylenes	1330-20-7	<0.00641	0.0188	0.00641	mg/kg	05.21.2020 10:55	U	1
Total BTEX		<0.00440	0.0188	0.00440	mg/kg	05.21.2020 10:55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	86	%	68-120	05.21.2020 10:55	
a,a,a-Trifluorotoluene	98-08-8	99	%	71-121	05.21.2020 10:55	

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Tex Mack 118

Sample Id:	**HA-1 (4.5-5)**	Matrix:	Soil	Date Received:	05.18.2020 14:20
Lab Sample Id:	661946-005	Date Collected:	05.14.2020 10:20	Sample Depth:	4.5 - 5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	05.21.2020 09:12	Basis:	Wet Weight
Seq Number:	3126693			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2440**	9.96	0.353	mg/kg	05.22.2020 00:39		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	SW8015P
Tech:	DRU			% Moisture:	
Analyst:	ISU	Date Prep:	05.28.2020 13:35	Basis:	Wet Weight
Seq Number:	3127458			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<9.94	49.7	9.94	mg/kg	05.31.2020 21:43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<9.94	49.7	9.94	mg/kg	05.31.2020 21:43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<9.94	49.7	9.94	mg/kg	05.31.2020 21:43	U	1
Total TPH	PHC635	<9.94	49.7	9.94	mg/kg	05.31.2020 21:43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	05.31.2020 21:43	
o-Terphenyl	84-15-1	100	%	70-135	05.31.2020 21:43	

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Tex Mack 118

Sample Id:	**HA-1 (4.5-5)**	Matrix:	Soil	Date Received:	05.18.2020 14:20
Lab Sample Id:	661946-005	Date Collected:	05.14.2020 10:20	Sample Depth:	4.5 - 5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	05.20.2020 12:00	Basis:	Wet Weight
Seq Number:	3126777				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00782	0.0173	0.00782	mg/kg	05.21.2020 14:22	U	1
Toluene	108-88-3	<0.00405	0.0173	0.00405	mg/kg	05.21.2020 14:22	U	1
Ethylbenzene	100-41-4	<0.00533	0.0173	0.00533	mg/kg	05.21.2020 14:22	U	1
m,p-Xylenes	179601-23-1	<0.00590	0.0346	0.00590	mg/kg	05.21.2020 14:22	U	1
o-Xylene	95-47-6	<0.00590	0.0173	0.00590	mg/kg	05.21.2020 14:22	U	1
Total Xylenes	1330-20-7	<0.00590	0.0173	0.00590	mg/kg	05.21.2020 14:22	U	1
Total BTEX		<0.00405	0.0173	0.00405	mg/kg	05.21.2020 14:22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	94	%	68-120	05.21.2020 14:22	
a,a,a-Trifluorotoluene	98-08-8	105	%	71-121	05.21.2020 14:22	

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Tex Mack 118

Sample Id:	**HA-2 (0-0.5)**	Matrix:	Soil	Date Received:	05.18.2020 14:20
Lab Sample Id:	661946-006	Date Collected:	05.14.2020 10:25	Sample Depth:	0 - 0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	05.21.2020 09:12	Basis:	Wet Weight
Seq Number:	3126693			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**4300**	9.98	0.353	mg/kg	05.22.2020 00:56		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	SW8015P
Tech:	DRU			% Moisture:	
Analyst:	ISU	Date Prep:	05.28.2020 13:38	Basis:	Wet Weight
Seq Number:	3127458			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**4820**	496	99.1	mg/kg	05.29.2020 12:51		10
Diesel Range Organics (DRO)	C10C28DRO	**14700**	496	99.1	mg/kg	05.29.2020 12:51		10
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**1770**	496	99.1	mg/kg	05.29.2020 12:51		10
Total TPH	PHC635	**21300**	496	99.1	mg/kg	05.29.2020 12:51		10

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	147	%	70-135	05.29.2020 12:51	**
o-Terphenyl	84-15-1	112	%	70-135	05.29.2020 12:51	

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Tex Mack 118

Sample Id:	**HA-2 (0-0.5)**	Matrix:	Soil	Date Received:	05.18.2020 14:20
Lab Sample Id:	661946-006	Date Collected:	05.14.2020 10:25	Sample Depth:	0 - 0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	05.20.2020 12:00	Basis:	Wet Weight
Seq Number:	3126777				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**19.0**	1.74	0.786	mg/kg	05.21.2020 14:46		100
Toluene	108-88-3	**193**	1.74	0.407	mg/kg	05.21.2020 14:46		100
Ethylbenzene	100-41-4	**171**	1.74	0.536	mg/kg	05.21.2020 14:46		100
m,p-Xylenes	179601-23-1	**121**	3.48	0.593	mg/kg	05.21.2020 14:46		100
o-Xylene	95-47-6	**57.4**	1.74	0.593	mg/kg	05.21.2020 14:46		100
Total Xylenes	1330-20-7	**178**	1.74	0.593	mg/kg	05.21.2020 14:46		100
Total BTEX		**561**	1.74	0.407	mg/kg	05.21.2020 14:46		100

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	118	%	68-120	05.21.2020 14:46	
a,a,a-Trifluorotoluene	98-08-8	97	%	71-121	05.21.2020 14:46	

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Tex Mack 118

Sample Id:	**HA-2 (0.5-1)**	Matrix:	Soil	Date Received:	05.18.2020 14:20
Lab Sample Id:	661946-007	Date Collected:	05.14.2020 10:30	Sample Depth:	0.5 - 1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	05.28.2020 16:00	Basis:	Wet Weight
Seq Number:	3127540				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**19.9**	0.992	0.448	mg/kg	05.28.2020 22:33	X	50
Toluene	108-88-3	**232**	0.992	0.232	mg/kg	05.28.2020 22:33	X	50
Ethylbenzene	100-41-4	**206**	0.992	0.306	mg/kg	05.28.2020 22:33	X	50
m,p-Xylenes	179601-23-1	**144**	1.98	0.338	mg/kg	05.28.2020 22:33	X	50
o-Xylene	95-47-6	**67.8**	0.992	0.338	mg/kg	05.28.2020 22:33	X	50
Total Xylenes	1330-20-7	**212**	0.992	0.338	mg/kg	05.28.2020 22:33		50
Total BTEX		**670**	0.992	0.232	mg/kg	05.28.2020 22:33		50

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	146	%	68-120	05.28.2020 22:33	**
a,a,a-Trifluorotoluene	98-08-8	86	%	71-121	05.28.2020 22:33	

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Tex Mack 118

Sample Id:	**HA-2 (1.5-2)**	Matrix:	Soil	Date Received:	05.18.2020 14:20
Lab Sample Id:	661946-008	Date Collected:	05.14.2020 10:35	Sample Depth:	1.5 - 2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	05.21.2020 09:12	Basis:	Wet Weight
Seq Number:	3126693			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**5880**	100	3.55	mg/kg	05.22.2020 09:31	D	10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	SW8015P
Tech:	DRU			% Moisture:	
Analyst:	ISU	Date Prep:	05.28.2020 13:41	Basis:	Wet Weight
Seq Number:	3127458			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**101**	49.7	9.93	mg/kg	05.29.2020 13:31		1
Diesel Range Organics (DRO)	C10C28DRO	**1280**	49.7	9.93	mg/kg	05.29.2020 13:31		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**215**	49.7	9.93	mg/kg	05.29.2020 13:31		1
Total TPH	PHC635	**1600**	49.7	9.93	mg/kg	05.29.2020 13:31		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	05.29.2020 13:31	
o-Terphenyl	84-15-1	99	%	70-135	05.29.2020 13:31	

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Tex Mack 118

Sample Id:	**HA-2 (1.5-2)**	Matrix:	Soil	Date Received:	05.18.2020 14:20
Lab Sample Id:	661946-008	Date Collected:	05.14.2020 10:35	Sample Depth:	1.5 - 2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	05.20.2020 12:00	Basis:	Wet Weight
Seq Number:	3126777				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.238**	0.396	0.179	mg/kg	05.21.2020 15:10	J	20
Toluene	108-88-3	**8.71**	0.396	0.0927	mg/kg	05.21.2020 15:10		20
Ethylbenzene	100-41-4	**13.6**	0.396	0.122	mg/kg	05.21.2020 15:10		20
m,p-Xylenes	179601-23-1	**10.1**	0.792	0.135	mg/kg	05.21.2020 15:10		20
o-Xylene	95-47-6	**5.54**	0.396	0.135	mg/kg	05.21.2020 15:10		20
Total Xylenes	1330-20-7	**15.6**	0.396	0.135	mg/kg	05.21.2020 15:10		20
Total BTEX		**38.2**	0.396	0.0927	mg/kg	05.21.2020 15:10		20

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	68-120	05.21.2020 15:10	
a,a,a-Trifluorotoluene	98-08-8	97	%	71-121	05.21.2020 15:10	

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Tex Mack 118

Sample Id:	**HA-2 (4.5-5)**	Matrix:	Soil	Date Received:	05.18.2020 14:20
Lab Sample Id:	661946-010	Date Collected:	05.14.2020 10:45	Sample Depth:	4.5 - 5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	05.21.2020 09:12	Basis:	Wet Weight
Seq Number:	3126693			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**12900**	100	3.55	mg/kg	05.22.2020 01:30		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	SW8015P
Tech:	DRU			% Moisture:	
Analyst:	ISU	Date Prep:	05.28.2020 13:44	Basis:	Wet Weight
Seq Number:	3127458			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**30.8**	50.2	10.0	mg/kg	05.29.2020 13:31	J	1
Diesel Range Organics (DRO)	C10C28DRO	**211**	50.2	10.0	mg/kg	05.29.2020 13:31		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**56.0**	50.2	10.0	mg/kg	05.29.2020 13:31		1
Total TPH	PHC635	**298**	50.2	10.0	mg/kg	05.29.2020 13:31		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	05.29.2020 13:31	
o-Terphenyl	84-15-1	96	%	70-135	05.29.2020 13:31	

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Tex Mack 118

Sample Id:	**HA-2 (4.5-5)**	Matrix:	Soil	Date Received:	05.18.2020 14:20
Lab Sample Id:	661946-010	Date Collected:	05.14.2020 10:45	Sample Depth:	4.5 - 5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	05.20.2020 12:00	Basis:	Wet Weight
Seq Number:	3126777				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0429	0.0949	0.0429	mg/kg	05.21.2020 15:34	U	5
Toluene	108-88-3	<0.0222	0.0949	0.0222	mg/kg	05.21.2020 15:34	U	5
Ethylbenzene	100-41-4	**0.531**	0.0949	0.0292	mg/kg	05.21.2020 15:34		5
m,p-Xylenes	179601-23-1	**0.588**	0.190	0.0324	mg/kg	05.21.2020 15:34		5
o-Xylene	95-47-6	**0.323**	0.0949	0.0324	mg/kg	05.21.2020 15:34		5
Total Xylenes	1330-20-7	**0.911**	0.0949	0.0324	mg/kg	05.21.2020 15:34		5
Total BTEX		**1.44**	0.0949	0.0222	mg/kg	05.21.2020 15:34		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	96	%	68-120	05.21.2020 15:34	
a,a,a-Trifluorotoluene	98-08-8	95	%	71-121	05.21.2020 15:34	

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 661946

Terracon-Lubbock

Tex Mack 118

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3126693 — Matrix: Solid — Date Prep: 05.21.2020
MB Sample Id: 7703800-1-BLK — LCS Sample Id: 7703800-1-BKS — LCSD Sample Id: 7703800-1-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	105	105	106	106	80-120	1	20	mg/kg	05.21.2020 18:12	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3126693 — Matrix: Soil — Date Prep: 05.21.2020
Parent Sample Id: 661927-001 — MS Sample Id: 661927-001 S — MSD Sample Id: 661927-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	15.4	100	112	97	111	96	80-120	1	20	mg/kg	05.21.2020 19:53	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3126693 — Matrix: Soil — Date Prep: 05.21.2020
Parent Sample Id: 661929-009 — MS Sample Id: 661929-009 S — MSD Sample Id: 661929-009 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	10.6	99.8	105	95	105	94	80-120	0	20	mg/kg	05.21.2020 19:02	

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3127458 — Matrix: Solid — Date Prep: 05.28.2020
MB Sample Id: 7704262-1-BLK — LCS Sample Id: 7704262-1-BKS — LCSD Sample Id: 7704262-1-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	848	85	865	87	70-135	2	35	mg/kg	05.29.2020 18:19	
Diesel Range Organics (DRO)	<10.0	1000	1010	101	978	98	70-135	3	35	mg/kg	05.29.2020 18:19	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	103		110		106		70-135	%	05.29.2020 18:19
o-Terphenyl	105		103		100		70-135	%	05.29.2020 18:19

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3127458 — Matrix: Solid — Date Prep: 05.28.2020
MB Sample Id: 7704262-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<10.0	mg/kg	05.31.2020 14:20	

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 661946

Terracon-Lubbock

Tex Mack 118

Analytical Method: **TPH By SW8015 Mod** Prep Method: SW8015P
Seq Number: 3127458 Matrix: Soil Date Prep: 05.28.2020
Parent Sample Id: 661942-003 MS Sample Id: 661942-003 S MSD Sample Id: 661942-003 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)	21.5	999	866	85	926	90	70-135	7	35	mg/kg	05.29.2020 19:19	
Diesel Range Organics (DRO)	<9.99	999	1010	101	1100	110	70-135	9	35	mg/kg	05.29.2020 19:19	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	108		115		70-135	%	05.29.2020 19:19
o-Terphenyl	103		116		70-135	%	05.29.2020 19:19

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3126777 Matrix: Solid Date Prep: 05.20.2020
MB Sample Id: 7703750-1-BLK LCS Sample Id: 7703750-1-BKS LCSD Sample Id: 7703750-1-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	1.93	97	1.94	97	55-120	1	20	mg/kg	05.21.2020 08:06	
Toluene	<0.00468	2.00	1.98	99	1.98	99	77-120	0	20	mg/kg	05.21.2020 08:06	
Ethylbenzene	<0.00616	2.00	1.93	97	1.95	98	77-120	1	20	mg/kg	05.21.2020 08:06	
m,p-Xylenes	<0.00682	4.00	3.87	97	3.91	98	78-120	1	20	mg/kg	05.21.2020 08:06	
o-Xylene	<0.00682	2.00	1.96	98	1.97	99	78-120	1	20	mg/kg	05.21.2020 08:06	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	89		93		94		68-120	%	05.21.2020 08:06
a,a,a-Trifluorotoluene	98		97		100		71-121	%	05.21.2020 08:06

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3127540 Matrix: Solid Date Prep: 05.28.2020
MB Sample Id: 7704479-1-BLK LCS Sample Id: 7704479-1-BKS LCSD Sample Id: 7704479-1-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	1.96	98	1.89	95	55-120	4	20	mg/kg	05.28.2020 20:31	
Toluene	<0.00468	2.00	2.01	101	1.96	98	77-120	3	20	mg/kg	05.28.2020 20:31	
Ethylbenzene	<0.00616	2.00	1.92	96	1.93	97	77-120	1	20	mg/kg	05.28.2020 20:31	
m,p-Xylenes	<0.00682	4.00	3.87	97	3.90	98	78-120	1	20	mg/kg	05.28.2020 20:31	
o-Xylene	<0.00682	2.00	1.94	97	1.96	98	78-120	1	20	mg/kg	05.28.2020 20:31	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	94		87		94		68-120	%	05.28.2020 20:31
a,a,a-Trifluorotoluene	104		94		96		71-121	%	05.28.2020 20:31

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

QC Summary 661946

Terracon-Lubbock

Tex Mack 118

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3126777 Matrix: Soil Date Prep: 05.20.2020
Parent Sample Id: 661946-003 MS Sample Id: 661946-003 S MSD Sample Id: 661946-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00879	1.95	1.80	92	1.72	92	54-120	5	25	mg/kg	05.21.2020 11:19	
Toluene	<0.00455	1.95	1.83	94	1.76	95	57-120	4	25	mg/kg	05.21.2020 11:19	
Ethylbenzene	<0.00599	1.95	1.77	91	1.72	92	58-131	3	25	mg/kg	05.21.2020 11:19	
m,p-Xylenes	<0.00663	3.89	3.53	91	3.46	93	62-124	2	25	mg/kg	05.21.2020 11:19	
o-Xylene	<0.00663	1.95	1.73	89	1.72	92	62-124	1	25	mg/kg	05.21.2020 11:19	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	86		85		68-120	%	05.21.2020 11:19
a,a,a-Trifluorotoluene	99		96		71-121	%	05.21.2020 11:19

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3127540 Matrix: Soil Date Prep: 05.28.2020
Parent Sample Id: 661946-007 MS Sample Id: 661946-007 S MSD Sample Id: 661946-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	19.9	96.3	20.0	0	21.6	2	54-120	8	25	mg/kg	05.28.2020 22:57	X
Toluene	232	96.3	220	0	238	6	57-120	8	25	mg/kg	05.28.2020 22:57	X
Ethylbenzene	206	96.3	201	0	221	15	58-131	9	25	mg/kg	05.28.2020 22:57	X
m,p-Xylenes	144	193	144	0	156	6	62-124	8	25	mg/kg	05.28.2020 22:57	X
o-Xylene	67.8	96.3	68.8	1	75.2	7	62-124	9	25	mg/kg	05.28.2020 22:57	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	156	**	164	**	68-120	%	05.28.2020 22:57
a,a,a-Trifluorotoluene	93		91		71-121	%	05.28.2020 22:57

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

66 1946

CHAIN OF CUSTODY RECORD

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:

Project Number: AR207079
Project Name: Tex Mack 118

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE:
TEMP OF COOLER WHEN RECEIVED (°C): 4.2, 1.87

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	10:00		X	HA-1 (0-0.5)	0	0.5	X				X	X	X		
S	5/14/2020	10:05		X	HA-1 (0.5-1)	0.5	1	X							X	
S	5/14/2020	10:10		X	HA-1 (1.5-2)	1.5	2	X				X	X	X		
S	5/14/2020	10:15		X	HA-1 (3.5-4)	3.5	4	X							X	
S	5/14/2020	10:20		X	HA-1 (4.5-5)	4.5	5	X				X	X	X		
S	5/14/2020	10:25		X	HA-2 (0-0.5)	0	0.5	X				X	X	X		
S	5/14/2020	10:30		X	HA-2 (0.5-1)	0.5	1	X							X	
S	5/14/2020	10:35		X	HA-2 (1.5-2)	1.5	2	X				X	X	X		
S	5/14/2020	10:40		X	HA-2 (3.5-4)	3.5	4	X							X	
S	5/14/2020	10:45		X	HA-2 (4.5-5)	4.5	5	X				X	X	X		

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 : 63920

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
661946-001	S	HA-1 (0-0.5)	05.14.2020 10:00	E300_CL	Chloride by EPA 300	05.25.2020	06.11.2020	JKR	CL	
661946-001	S	HA-1 (0-0.5)	05.14.2020 10:00	SW8015DRO-ORO	TPH DRO-ORO by SW-846 8015	05.25.2020	05.28.2020	JKR	PHCD	
661946-003	S	HA-1 (1.5-2)	05.14.2020 10:10	E300_CL	Chloride by EPA 300	05.25.2020	06.11.2020	JKR	CL	
661946-003	S	HA-1 (1.5-2)	05.14.2020 10:10	SW8015DRO-ORO	TPH DRO-ORO by SW-846 8015	05.25.2020	05.28.2020	JKR	PHCD	
661946-005	S	HA-1 (4.5-5)	05.14.2020 10:20	SW8015DRO-ORO	TPH DRO-ORO by SW-846 8015	05.25.2020	05.28.2020	JKR	PHCD	
661946-005	S	HA-1 (4.5-5)	05.14.2020 10:20	E300_CL	Chloride by EPA 300	05.25.2020	06.11.2020	JKR	CL	
661946-006	S	HA-2 (0-0.5)	05.14.2020 10:25	E300_CL	Chloride by EPA 300	05.25.2020	06.11.2020	JKR	CL	
661946-006	S	HA-2 (0-0.5)	05.14.2020 10:25	SW8015DRO-ORO	TPH DRO-ORO by SW-846 8015	05.25.2020	05.28.2020	JKR	PHCD	
661946-008	S	HA-2 (1.5-2)	05.14.2020 10:35	SW8015DRO-ORO	TPH DRO-ORO by SW-846 8015	05.25.2020	05.28.2020	JKR	PHCD	
661946-008	S	HA-2 (1.5-2)	05.14.2020 10:35	E300_CL	Chloride by EPA 300	05.25.2020	06.11.2020	JKR	CL	
661946-010	S	HA-2 (4.5-5)	05.14.2020 10:45	SW8015DRO-ORO	TPH DRO-ORO by SW-846 8015	05.25.2020	05.28.2020	JKR	PHCD	
661946-010	S	HA-2 (4.5-5)	05.14.2020 10:45	E300_CL	Chloride by EPA 300	05.25.2020	06.11.2020	JKR	CL	

Inter Office Shipment or Sample Comments:

Relinquished By: Brenda Ward
Brenda Ward

Date Relinquished: 05.19.2020

Received By: Jhyrom Edralin

Date Received: 05.20.2020

Cooler Temperature: 3.5

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 63920

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 11.54 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 02.20.00 PM

Work Order #: 661946

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**	TPH, Chlordies 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

eurofins | Environment Testing Xenco

Certificate of Analysis Summary 680913

Terracon-Lubbock, Lubbock, TX

Project Name: Tex Mack 118

Project Id: AR207079
Contact: Joseph Guesnier
Project Location:

Date Received in Lab: Fri 12.11.2020 16:45
Report Date: 12.16.2020 16:38
Project Manager: Jessica Kramer

Analysis Requested							
	Lab Id:	680913-001		680913-002			
	Field Id:	WS-(1.5-2)		FS- (4.5-5)			
	Depth:	1.5-2 ft		4.5-5 ft			
	Matrix:	SOIL		SOIL			
	Sampled:	12.10.2020 13:00		12.10.2020 13:05			
BTEX by EPA 8021B **SUB: T104704400-20-21**	***Extracted:***	12.15.2020 12:30		12.15.2020 12:30			
	Analyzed:	12.15.2020 18:07		12.15.2020 18:28			
	Units/RL:	mg/kg	RL	mg/kg	RL		
Benzene		<0.00199	0.00199	<0.00202	0.00202		
Toluene		<0.00199	0.00199	<0.00202	0.00202		
Ethylbenzene		0.00536	0.00199	0.00276	0.00202		
m,p-Xylenes		0.0279	0.00398	0.0144	0.00403		
o-Xylene		0.00768	0.00199	0.00432	0.00202		
Xylenes, Total		0.0356	0.00199	0.0187	0.00202		
Total BTEX		0.0409	0.00199	0.0215	0.00202		
Chloride by EPA 300 **SUB: T104704400-20-21**	***Extracted:***	12.15.2020 16:50		12.15.2020 16:50			
	Analyzed:	12.15.2020 18:39		12.15.2020 18:55			
	Units/RL:	mg/kg	RL	mg/kg	RL		
Chloride		6.75 X	5.05	13.5	4.96		
TPH by SW8015 Mod **SUB: T104704400-20-21**	***Extracted:***	12.16.2020 10:35		12.16.2020 10:35			
	Analyzed:	** ** ** **		** ** ** **			
	Units/RL:	mg/kg	RL	mg/kg	RL		
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0	<50.0	50.0		
Diesel Range Organics (DRO)		<50.0	50.0	<50.0	50.0		
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<50.0	50.0		
Total TPH		<50.0	50.0	<50.0	50.0		

BRL - Below Reporting Limit

Jessica Kramer

eurofins | Environment Testing Xenco

Analytical Report 680913

for

Terracon-Lubbock

Project Manager: Joseph Guesnier

Tex Mack 118

AR207079

12.16.2020

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)

eurofins | Environment Testing Xenco

12.16.2020

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

Reference: Eurofins Xenco, LLC Report No(s): **680913**
Tex Mack 118
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) 680913. 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. 680913 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 680913

Terracon-Lubbock, Lubbock, TX

Tex Mack 118

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
WS-(1.5-2)	S	12.10.2020 13:00	1.5 - 2 ft	680913-001
FS- (4.5-5)	S	12.10.2020 13:05	4.5 - 5 ft	680913-002

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CASE NARRATIVE

Client Name: Terracon-Lubbock

Project Name: Tex Mack 118

Project ID: *AR207079*
Work Order Number(s): *680913*

Report Date: *12.16.2020*
Date Received: *12.11.2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3144975 BTEX by EPA 8021B

Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected.
Samples affected are: 680977-001 S,680977-001 SD.

Batch: LBA-3145040 Chloride by EPA 300

Lab Sample ID 680923-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD).
Chloride recovered above QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference.
Samples in the analytical batch are: 680913-001, -002.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

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Certificate of Analytical Results 680913

Terracon-Lubbock, Lubbock, TX

Tex Mack 118

Sample Id: **WS-(1.5-2)** Matrix: Soil Date Received:12.11.2020 16:45

Lab Sample Id: 680913-001 Date Collected: 12.10.2020 13:00 Sample Depth: 1.5 - 2 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 12.15.2020 16:50 % Moisture:

Seq Number: 3145040 Basis: Wet Weight

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**6.75**	5.05	mg/kg	12.15.2020 18:39	X	1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 12.16.2020 10:35 % Moisture:

Seq Number: 3145078 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	12.15.2020 22:52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.15.2020 22:52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.15.2020 22:52	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	12.15.2020 22:52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-130	12.15.2020 22:52	
o-Terphenyl	84-15-1	87	%	70-130	12.15.2020 22:52	

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Certificate of Analytical Results 680913

Terracon-Lubbock, Lubbock, TX

Tex Mack 118

Sample Id:	**WS-(1.5-2)**	Matrix:	Soil	Date Received:	12.11.2020 16:45
Lab Sample Id:	680913-001	Date Collected:	12.10.2020 13:00	Sample Depth:	1.5 - 2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	12.15.2020 12:30	% Moisture:	
Seq Number:	3144975			Basis:	Wet Weight
				SUB:	T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.15.2020 18:07	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.15.2020 18:07	U	1
Ethylbenzene	100-41-4	**0.00536**	0.00199	mg/kg	12.15.2020 18:07		1
m,p-Xylenes	179601-23-1	**0.0279**	0.00398	mg/kg	12.15.2020 18:07		1
o-Xylene	95-47-6	**0.00768**	0.00199	mg/kg	12.15.2020 18:07		1
Xylenes, Total	1330-20-7	**0.0356**	0.00199	mg/kg	12.15.2020 18:07		1
Total BTEX		**0.0409**	0.00199	mg/kg	12.15.2020 18:07		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	122	%	70-130	12.15.2020 18:07	
1,4-Difluorobenzene	540-36-3	92	%	70-130	12.15.2020 18:07	

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Certificate of Analytical Results 680913

Terracon-Lubbock, Lubbock, TX

Tex Mack 118

Sample Id: **FS- (4.5-5)** Matrix: Soil Date Received: 12.11.2020 16:45

Lab Sample Id: 680913-002 Date Collected: 12.10.2020 13:05 Sample Depth: 4.5 - 5 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE

Analyst: CHE Date Prep: 12.15.2020 16:50 % Moisture:

Seq Number: 3145040 Basis: Wet Weight

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**13.5**	4.96	mg/kg	12.15.2020 18:55		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DVM

Analyst: ARM Date Prep: 12.16.2020 10:35 % Moisture:

Seq Number: 3145078 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	12.15.2020 23:56	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.15.2020 23:56	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.15.2020 23:56	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	12.15.2020 23:56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-130	12.15.2020 23:56	
o-Terphenyl	84-15-1	95	%	70-130	12.15.2020 23:56	

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Certificate of Analytical Results 680913

Terracon-Lubbock, Lubbock, TX

Tex Mack 118

Sample Id:	**FS- (4.5-5)**	Matrix:	Soil	Date Received:	12.11.2020 16:45
Lab Sample Id:	680913-002	Date Collected:	12.10.2020 13:05	Sample Depth:	4.5 - 5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL				
Analyst:	KTL	Date Prep:	12.15.2020 12:30	% Moisture:	
Seq Number:	3144975			Basis:	Wet Weight
				SUB:	T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	12.15.2020 18:28	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	12.15.2020 18:28	U	1
Ethylbenzene	100-41-4	**0.00276**	0.00202	mg/kg	12.15.2020 18:28		1
m,p-Xylenes	179601-23-1	**0.0144**	0.00403	mg/kg	12.15.2020 18:28		1
o-Xylene	95-47-6	**0.00432**	0.00202	mg/kg	12.15.2020 18:28		1
Xylenes, Total	1330-20-7	**0.0187**	0.00202	mg/kg	12.15.2020 18:28		1
Total BTEX		**0.0215**	0.00202	mg/kg	12.15.2020 18:28		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	113	%	70-130	12.15.2020 18:28	
1,4-Difluorobenzene	540-36-3	97	%	70-130	12.15.2020 18:28	

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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 680913

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Terracon-Lubbock

Tex Mack 118

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3145040 — Matrix: Solid — Date Prep: 12.15.2020
MB Sample Id: 7717197-1-BLK — LCS Sample Id: 7717197-1-BKS — LCSD Sample Id: 7717197-1-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	260	104	259	104	90-110	0	20	mg/kg	12.15.2020 18:29	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3145040 — Matrix: Soil — Date Prep: 12.15.2020
Parent Sample Id: 680913-001 — MS Sample Id: 680913-001 S — MSD Sample Id: 680913-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	6.75	253	291	112	279	108	90-110	4	20	mg/kg	12.15.2020 18:45	X

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3145040 — Matrix: Soil — Date Prep: 12.15.2020
Parent Sample Id: 680923-001 — MS Sample Id: 680923-001 S — MSD Sample Id: 680923-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	247	1250	1600	108	1580	107	90-110	1	20	mg/kg	12.15.2020 19:57	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3145078 — Matrix: Solid — Date Prep: 12.16.2020
MB Sample Id: 7717219-1-BLK — LCS Sample Id: 7717219-1-BKS — LCSD Sample Id: 7717219-1-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	945	95	949	95	70-130	0	20	mg/kg	12.15.2020 22:08	
Diesel Range Organics (DRO)	<50.0	1000	973	97	950	95	70-130	2	20	mg/kg	12.15.2020 22:08	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	93		100		97		70-130	%	12.15.2020 22:08
o-Terphenyl	97		96		96		70-130	%	12.15.2020 22:08

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3145078 — Matrix: Solid — Date Prep: 12.16.2020
MB Sample Id: 7717219-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	12.15.2020 21:46	

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

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QC Summary 680913

Terracon-Lubbock

Tex Mack 118

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3145078 Matrix: Soil Date Prep: 12.16.2020
Parent Sample Id: 680913-001 MS Sample Id: 680913-001 S MSD Sample Id: 680913-001 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	1050	105	1100	110	70-130	5	20	mg/kg	12.15.2020 23:13	
Diesel Range Organics (DRO)	<49.9	997	1060	106	1170	117	70-130	10	20	mg/kg	12.15.2020 23:13	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	96		103		70-130	%	12.15.2020 23:13
o-Terphenyl	88		102		70-130	%	12.15.2020 23:13

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3144975 Matrix: Solid Date Prep: 12.15.2020
MB Sample Id: 7717155-1-BLK LCS Sample Id: 7717155-1-BKS LCSD Sample Id: 7717155-1-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	0.0743	74	0.0979	98	70-130	27	35	mg/kg	12.15.2020 11:00	
Toluene	<0.00200	0.100	0.0733	73	0.0900	90	70-130	20	35	mg/kg	12.15.2020 11:00	
Ethylbenzene	<0.00200	0.100	0.0885	89	0.100	100	70-130	12	35	mg/kg	12.15.2020 11:00	
m,p-Xylenes	<0.00400	0.200	0.175	88	0.198	99	70-130	12	35	mg/kg	12.15.2020 11:00	
o-Xylene	<0.00200	0.100	0.0887	89	0.0994	99	70-130	11	35	mg/kg	12.15.2020 11:00	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		103		104		70-130	%	12.15.2020 11:00
4-Bromofluorobenzene	109		103		103		70-130	%	12.15.2020 11:00

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3144975 Matrix: Soil Date Prep: 12.15.2020
Parent Sample Id: 680977-001 MS Sample Id: 680977-001 S MSD Sample Id: 680977-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	2.72	0.0990	1.39	0	1.36	0	70-130	2	35	mg/kg	12.15.2020 11:41	X
Toluene	3.46	0.0990	2.31	0	2.33	0	70-130	1	35	mg/kg	12.15.2020 11:41	X
Ethylbenzene	0.448	0.0990	0.405	0	0.367	0	70-130	10	35	mg/kg	12.15.2020 11:41	X
m,p-Xylenes	0.858	0.198	0.836	0	0.761	0	70-130	9	35	mg/kg	12.15.2020 11:41	X
o-Xylene	0.299	0.0990	0.315	16	0.275	0	70-130	14	35	mg/kg	12.15.2020 11:41	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	129		125		70-130	%	12.15.2020 11:41
4-Bromofluorobenzene	133	**	131	**	70-130	%	12.15.2020 11:41

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

680913

CHAIN OF CUSTODY RECORD

Terracon

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

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

Project Number: AR207079
Project Name: Tex Mack 118

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE:

TEMP OF COOLER WHEN RECEIVED (°C): 1.2.4 / -4.8 / 4.3

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	12/10/2020	13:00	X		WS - (1.5-2)	1.5	2	X				X	X	X					
S	12/10/2020	13:05	X		FS - (4.5-5)	4.5	5	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:
	12-11-20	4:45	Holly Taylor	12/11/20	1645

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 : 74755

Date/Time: 12.14.2020
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.:
E-Mail: jessica.kramer@eurofinset.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
680913-001	S	WS-(1.5-2)	12.10.2020 13:00	SW8015MOD_NM	TPH by SW8015 Mod	12.15.2020	12.24.2020	JKR	PHCC10C28 PHCC28C3	
680913-001	S	WS-(1.5-2)	12.10.2020 13:00	SW8021B	BTEX by EPA 8021B	12.15.2020	12.24.2020	JKR	BR4FBZ BZ BZME EBZ	
680913-001	S	WS-(1.5-2)	12.10.2020 13:00	E300_CL	Chloride by EPA 300	12.15.2020	01.07.2021	JKR	CL	
680913-002	S	FS- (4.5-5)	12.10.2020 13:05	SW8021B	BTEX by EPA 8021B	12.15.2020	12.24.2020	JKR	BR4FBZ BZ BZME EBZ	
680913-002	S	FS- (4.5-5)	12.10.2020 13:05	E300_CL	Chloride by EPA 300	12.15.2020	01.07.2021	JKR	CL	
680913-002	S	FS- (4.5-5)	12.10.2020 13:05	SW8015MOD_NM	TPH by SW8015 Mod	12.15.2020	12.24.2020	JKR	PHCC10C28 PHCC28C3	

Inter Office Shipment or Sample Comments:

Relinquished By: Teddy Randall Lee
Randall Lee

Date Relinquished: 12.14.2020

Received By: Jessica Kramer
Jessica Kramer

Date Received: 12.16.2020

Cooler Temperature: 2.9

Eurofins Xenco, LLC

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 74755

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

Sent By: Randall Lee **Date Sent:** 12.14.2020 11.42 AM

Received By: Jessica Kramer **Date Received:** 12.16.2020 09.10 AM

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	2.9	
#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: 12.16.2020

Jessica Kramer

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Terracon-Lubbock

Date/ Time Received: 12.11.2020 04.45.00 PM

Work Order #: 680913

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)?	-4.8	
#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**	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: 12.14.2020

Checklist reviewed by: Jessica Kramer
Jessica Kramer
Date: 12.15.2020

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Xenco, Lubbock
6701 Aberdeen Ave.
Suite 8
Lubbock, TX 79424
Tel: (806)794-1296

Laboratory Job ID: 820-756-1
Client Project/Site: Tex Mack 118
Revision: 1

For:
Terracon Consulting Eng & Scientists
5827 50th St
Suite 1
Lubbock, Texas 79424

Attn: Erin Lloyd

JKramer

Authorized for release by:
5/26/2021 9:43:33 PM

Jessica Kramer, Project Manager
(432)704-5440
jessica.kramer@eurofinset.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD,and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments. QC data that exceed the upper limits and are associated with non-detect samples are qualified but no further narration is needed since the bias is high and does not change a non-detect result. Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Coliform MCLs
· Based on the EPA primary drinking water standard MCL for total coliforms, a water supply is considered bacteriologically “SAFE” if no coliform bacteria are detected. To be considered “SAFE” your report should indicate “<1 cfu/100mL” or “NEG” for the coliform test. If you report indicates a positive result “POS” or a value greater than or equal to one, then your supply is “UNSAFE FOR DRINKING” contact your local health department.

Warranties, Terms, and Conditions
· Analyses for Field Parameters are performed by EQC field staff. Locations and certifications are identified on the Chain of Custody as follows:
ERF = field staff performs tests under NJ State certification #02015
VL = field staff performs tests under NJ State certification #06005
WG = field staff performs tests under NJ State certification #PA001
H = field staff performs tests under NJ NELAP certification #PA093, PA NELAP certification # 46-05499

· Test results meet all TNI or other applicable regulatory agency requirements, including holding times and preservation, unless otherwise indicated.

· The report shall not be reproduced, except in full, without the written consent of the laboratory

· All samples are collected as “grab” samples unless otherwise identified.

· Reported results related only to the samples as tested. EQC is not responsible for sample integrity unless sampling has been performed by a member of our staff.

· EQC is not responsible for sampling and/or testing omissions. Note that regulatory authorities may assess substantial fines for testing omissions. Please track your sample collection schedules and results on a regular basis (e.g. weekly, monthly, or quarterly) to ensure compliance.

· Eurofins’ online data portal “TotalAccess” will provide you with real-time access to collection dates and testing results. Please contact Client Services for further information.

· The following personnel or their deputies have approved the results of the tests performed by EQC: Nicki Smith (Environmental Chemistry) and Zachary Smith (Water Microbiology).

JKramer

Jessica Kramer
Project Manager
5/26/2021 9:43:33 PM

Client: Terracon Consulting Eng & Scientists
Project/Site: Tex Mack 118

Laboratory Job ID: 820-756-1

Table of Contents

Definitions/Glossary

Client: Terracon Consulting Eng & Scientists Job ID: 820-756-1
Project/Site: Tex Mack 118

Qualifiers

GC VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Terracon Consulting Eng & Scientists
Project/Site: Tex Mack 118

Job ID: 820-756-1

Job ID: 820-756-1

Laboratory: Eurofins Xenco, Lubbock

Narrative

Job Narrative
820-756-1

REVISION

The report being provided is a revision of the original report sent on 5/25/2021. The report (revision 1) is being revised due to Per client email, requesting re run on sample PS-2 (1.5-2).

Report revision history

Receipt
The samples were received on 5/20/2021 9:35 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was -9.3°C

GC VOA
Method 8021B: The continuing calibration verification (CCV) associated with batch 880-3336 recovered above the upper control limit for <AffectedAnalytes>. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-3388 recovered under the control limit for Benzene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8021B: The laboratory control sample (LCS) and / for preparation batch 880-3415 and analytical batch 880-3452 recovered outside control limits for the following analytes: Ethylbenzene m-Xylene & p-Xylene o-Xylene. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8021B: The laboratory control sample (LCS) associated with preparation batch 880-3415 and analytical batch 880-3452 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC Semi VOA
Method 8015MOD_NM: The laboratory control sample (LCS) associated with preparation batch 880-3359 and analytical batch 880-3365 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Job ID: 820-756-1
Project/Site: Tex Mack 118

Client Sample ID: PS-1 (0-0.5)
Lab Sample ID: 820-756-1
Date Collected: 05/18/21 12:00
Matrix: Solid
Date Received: 05/20/21 09:35
Sample Depth: 0' - 0.5'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/21/21 11:00	05/21/21 16:22	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/21/21 11:00	05/21/21 16:22	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/21/21 11:00	05/21/21 16:22	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/21/21 11:00	05/21/21 16:22	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/21/21 11:00	05/21/21 16:22	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/21/21 11:00	05/21/21 16:22	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		05/21/21 11:00	05/21/21 16:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*131*	*S1+*	*70 - 130*	*05/21/21 11:00*	*05/21/21 16:22*	*1*
1,4-Difluorobenzene (Surr)	*82*		*70 - 130*	*05/21/21 11:00*	*05/21/21 16:22*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/21/21 15:04	05/23/21 01:23	1
Diesel Range Organics (Over C10-C28)	<49.9	U *+	49.9		mg/Kg		05/21/21 15:04	05/23/21 01:23	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/21/21 15:04	05/23/21 01:23	1
Total TPH	<49.9	U	49.9		mg/Kg		05/21/21 15:04	05/23/21 01:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*112*		*70 - 130*	*05/21/21 15:04*	*05/23/21 01:23*	*1*
o-Terphenyl	*120*		*70 - 130*	*05/21/21 15:04*	*05/23/21 01:23*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<4.97	U	4.97		mg/Kg			05/22/21 14:45	1

Client Sample ID: PS-1 (1.5-2)
Lab Sample ID: 820-756-2
Date Collected: 05/18/21 12:05
Matrix: Solid
Date Received: 05/20/21 09:35
Sample Depth: 1.5' - 2'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/21/21 11:00	05/21/21 16:47	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/21/21 11:00	05/21/21 16:47	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/21/21 11:00	05/21/21 16:47	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/21/21 11:00	05/21/21 16:47	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/21/21 11:00	05/21/21 16:47	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/21/21 11:00	05/21/21 16:47	1
Total BTEX	<0.00398	U	0.00398		mg/Kg		05/21/21 11:00	05/21/21 16:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*135*	*S1+*	*70 - 130*	*05/21/21 11:00*	*05/21/21 16:47*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*05/21/21 11:00*	*05/21/21 16:47*	*1*

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Tex Mack 118

Job ID: 820-756-1

Client Sample ID: PS-1 (1.5-2)

Lab Sample ID: 820-756-2
Matrix: Solid
Date Collected: 05/18/21 12:05
Date Received: 05/20/21 09:35
Sample Depth: 1.5' - 2'

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		05/21/21 15:04	05/23/21 02:28	1
Diesel Range Organics (Over C10-C28)	<49.8	U *+	49.8		mg/Kg		05/21/21 15:04	05/23/21 02:28	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		05/21/21 15:04	05/23/21 02:28	1
Total TPH	<49.8	U	49.8		mg/Kg		05/21/21 15:04	05/23/21 02:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*91*		*70 - 130*	*05/21/21 15:04*	*05/23/21 02:28*	*1*
o-Terphenyl	*95*		*70 - 130*	*05/21/21 15:04*	*05/23/21 02:28*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**5.15**		4.96		mg/Kg			05/22/21 15:01	1

Client Sample ID: PS-2 (0-0.5)

Lab Sample ID: 820-756-3
Matrix: Solid
Date Collected: 05/18/21 12:10
Date Received: 05/20/21 09:35
Sample Depth: 0' - 0.5'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/21/21 11:00	05/21/21 17:13	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/21/21 11:00	05/21/21 17:13	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/21/21 11:00	05/21/21 17:13	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		05/21/21 11:00	05/21/21 17:13	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/21/21 11:00	05/21/21 17:13	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		05/21/21 11:00	05/21/21 17:13	1
Total BTEX	<0.00401	U	0.00401		mg/Kg		05/21/21 11:00	05/21/21 17:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*130*		*70 - 130*	*05/21/21 11:00*	*05/21/21 17:13*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*05/21/21 11:00*	*05/21/21 17:13*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		05/21/21 15:04	05/23/21 02:49	1
Diesel Range Organics (Over C10-C28)	<49.8	U *+	49.8		mg/Kg		05/21/21 15:04	05/23/21 02:49	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		05/21/21 15:04	05/23/21 02:49	1
Total TPH	<49.8	U	49.8		mg/Kg		05/21/21 15:04	05/23/21 02:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*112*		*70 - 130*	*05/21/21 15:04*	*05/23/21 02:49*	*1*
o-Terphenyl	*115*		*70 - 130*	*05/21/21 15:04*	*05/23/21 02:49*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**477**		4.95		mg/Kg			05/22/21 15:06	1

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Job ID: 820-756-1
Project/Site: Tex Mack 118

Client Sample ID: PS-2 (1.5-2)
Lab Sample ID: 820-756-4
Date Collected: 05/18/21 12:15
Matrix: Solid
Date Received: 05/20/21 09:35
Sample Depth: 1.5' - 2'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		05/21/21 11:00	05/21/21 17:38	1
Toluene	<0.00202	U	0.00202		mg/Kg		05/21/21 11:00	05/21/21 17:38	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		05/21/21 11:00	05/21/21 17:38	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		05/21/21 11:00	05/21/21 17:38	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		05/21/21 11:00	05/21/21 17:38	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		05/21/21 11:00	05/21/21 17:38	1
Total BTEX	<0.00404	U	0.00404		mg/Kg		05/21/21 11:00	05/21/21 17:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*120*		*70 - 130*	*05/21/21 11:00*	*05/21/21 17:38*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*05/21/21 11:00*	*05/21/21 17:38*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/21/21 15:04	05/23/21 03:11	1
Diesel Range Organics (Over C10-C28)	<49.9	U *+	49.9		mg/Kg		05/21/21 15:04	05/23/21 03:11	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/21/21 15:04	05/23/21 03:11	1
Total TPH	<49.9	U	49.9		mg/Kg		05/21/21 15:04	05/23/21 03:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*116*		*70 - 130*	*05/21/21 15:04*	*05/23/21 03:11*	*1*
o-Terphenyl	*124*		*70 - 130*	*05/21/21 15:04*	*05/23/21 03:11*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1100**		4.99		mg/Kg			05/22/21 15:11	1

Client Sample ID: PS-3 (0-0.5)
Lab Sample ID: 820-756-5
Date Collected: 05/18/21 12:20
Matrix: Solid
Date Received: 05/20/21 09:35
Sample Depth: 0' - 0.5'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		05/21/21 11:00	05/21/21 18:03	1
Toluene	<0.00201	U	0.00201		mg/Kg		05/21/21 11:00	05/21/21 18:03	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		05/21/21 11:00	05/21/21 18:03	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		05/21/21 11:00	05/21/21 18:03	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		05/21/21 11:00	05/21/21 18:03	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		05/21/21 11:00	05/21/21 18:03	1
Total BTEX	<0.00402	U	0.00402		mg/Kg		05/21/21 11:00	05/21/21 18:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*	*05/21/21 11:00*	*05/21/21 18:03*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*05/21/21 11:00*	*05/21/21 18:03*	*1*

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Tex Mack 118

Job ID: 820-756-1

Client Sample ID: PS-3 (0-0.5)

Lab Sample ID: 820-756-5
Matrix: Solid
Date Collected: 05/18/21 12:20
Date Received: 05/20/21 09:35
Sample Depth: 0' - 0.5'

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/21/21 14:45	05/22/21 21:51	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/21/21 14:45	05/22/21 21:51	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/21/21 14:45	05/22/21 21:51	1
Total TPH	<50.0	U	50.0		mg/Kg		05/21/21 14:45	05/22/21 21:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*95*		*70 - 130*	*05/21/21 14:45*	*05/22/21 21:51*	*1*
o-Terphenyl	*99*		*70 - 130*	*05/21/21 14:45*	*05/22/21 21:51*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<4.95	U	4.95		mg/Kg			05/22/21 15:16	1

Client Sample ID: PS-3 (1.5-2)

Lab Sample ID: 820-756-6
Matrix: Solid
Date Collected: 05/18/21 12:25
Date Received: 05/20/21 09:35
Sample Depth: 1.5' - 2'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/21/21 11:00	05/21/21 18:28	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/21/21 11:00	05/21/21 18:28	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/21/21 11:00	05/21/21 18:28	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		05/21/21 11:00	05/21/21 18:28	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/21/21 11:00	05/21/21 18:28	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		05/21/21 11:00	05/21/21 18:28	1
Total BTEX	<0.00399	U	0.00399		mg/Kg		05/21/21 11:00	05/21/21 18:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*120*		*70 - 130*	*05/21/21 11:00*	*05/21/21 18:28*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*05/21/21 11:00*	*05/21/21 18:28*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/21/21 14:45	05/22/21 22:12	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/21/21 14:45	05/22/21 22:12	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/21/21 14:45	05/22/21 22:12	1
Total TPH	<50.0	U	50.0		mg/Kg		05/21/21 14:45	05/22/21 22:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*114*		*70 - 130*	*05/21/21 14:45*	*05/22/21 22:12*	*1*
o-Terphenyl	*120*		*70 - 130*	*05/21/21 14:45*	*05/22/21 22:12*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<4.95	U	4.95		mg/Kg			05/22/21 15:32	1

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Tex Mack 118

Job ID: 820-756-1

Client Sample ID: PS-4 (0-0.5)

Lab Sample ID: 820-756-7
Matrix: Solid
Date Collected: 05/18/21 12:30
Date Received: 05/20/21 09:35
Sample Depth: 0' - 0.5'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/21/21 11:00	05/21/21 18:53	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/21/21 11:00	05/21/21 18:53	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/21/21 11:00	05/21/21 18:53	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/21/21 11:00	05/21/21 18:53	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/21/21 11:00	05/21/21 18:53	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/21/21 11:00	05/21/21 18:53	1
Total BTEX	<0.00398	U	0.00398		mg/Kg		05/21/21 11:00	05/21/21 18:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*	*05/21/21 11:00*	*05/21/21 18:53*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*05/21/21 11:00*	*05/21/21 18:53*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/21/21 14:45	05/22/21 22:34	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/21/21 14:45	05/22/21 22:34	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/21/21 14:45	05/22/21 22:34	1
Total TPH	<49.9	U	49.9		mg/Kg		05/21/21 14:45	05/22/21 22:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*114*		*70 - 130*	*05/21/21 14:45*	*05/22/21 22:34*	*1*
o-Terphenyl	*117*		*70 - 130*	*05/21/21 14:45*	*05/22/21 22:34*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.04	U	5.04		mg/Kg			05/22/21 15:37	1

Client Sample ID: PS-4 (1.5-2)

Lab Sample ID: 820-756-8
Matrix: Solid
Date Collected: 05/18/21 12:35
Date Received: 05/20/21 09:35
Sample Depth: 1.5' - 2'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		05/21/21 11:00	05/21/21 19:19	1
Toluene	<0.00201	U	0.00201		mg/Kg		05/21/21 11:00	05/21/21 19:19	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		05/21/21 11:00	05/21/21 19:19	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		05/21/21 11:00	05/21/21 19:19	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		05/21/21 11:00	05/21/21 19:19	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		05/21/21 11:00	05/21/21 19:19	1
Total BTEX	<0.00402	U	0.00402		mg/Kg		05/21/21 11:00	05/21/21 19:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*	*05/21/21 11:00*	*05/21/21 19:19*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*05/21/21 11:00*	*05/21/21 19:19*	*1*

Client Sample Results

Client: Terracon Consulting Eng & Scientists Job ID: 820-756-1
Project/Site: Tex Mack 118

Client Sample ID: PS-4 (1.5-2)
Lab Sample ID: 820-756-8
Date Collected: 05/18/21 12:35
Matrix: Solid
Date Received: 05/20/21 09:35
Sample Depth: 1.5' - 2'

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/21/21 14:45	05/22/21 22:55	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/21/21 14:45	05/22/21 22:55	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/21/21 14:45	05/22/21 22:55	1
Total TPH	<50.0	U	50.0		mg/Kg		05/21/21 14:45	05/22/21 22:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*109*		*70 - 130*	*05/21/21 14:45*	*05/22/21 22:55*	*1*
o-Terphenyl	*104*		*70 - 130*	*05/21/21 14:45*	*05/22/21 22:55*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**12.9**		6.23		mg/Kg			05/22/21 15:42	1

Client Sample ID: PS-5 (0-0.5)
Lab Sample ID: 820-756-9
Date Collected: 05/18/21 12:40
Matrix: Solid
Date Received: 05/20/21 09:35
Sample Depth: 0' - 0.5'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/21/21 11:00	05/21/21 19:45	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/21/21 11:00	05/21/21 19:45	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/21/21 11:00	05/21/21 19:45	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		05/21/21 11:00	05/21/21 19:45	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/21/21 11:00	05/21/21 19:45	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		05/21/21 11:00	05/21/21 19:45	1
Total BTEX	<0.00401	U	0.00401		mg/Kg		05/21/21 11:00	05/21/21 19:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*188*	*S1+*	*70 - 130*	*05/21/21 11:00*	*05/21/21 19:45*	*1*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*	*05/21/21 11:00*	*05/21/21 19:45*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/21/21 14:45	05/22/21 23:17	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/21/21 14:45	05/22/21 23:17	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/21/21 14:45	05/22/21 23:17	1
Total TPH	<49.9	U	49.9		mg/Kg		05/21/21 14:45	05/22/21 23:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*107*		*70 - 130*	*05/21/21 14:45*	*05/22/21 23:17*	*1*
o-Terphenyl	*107*		*70 - 130*	*05/21/21 14:45*	*05/22/21 23:17*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.03	U	5.03		mg/Kg			05/22/21 15:48	1

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Job ID: 820-756-1
Project/Site: Tex Mack 118

Client Sample ID: PS-5 (1.5-2)
Lab Sample ID: 820-756-10
Date Collected: 05/18/21 12:45
Matrix: Solid
Date Received: 05/20/21 09:35
Sample Depth: 1.5' - 2'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		05/21/21 11:00	05/21/21 20:10	1
Toluene	<0.00202	U	0.00202		mg/Kg		05/21/21 11:00	05/21/21 20:10	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		05/21/21 11:00	05/21/21 20:10	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		05/21/21 11:00	05/21/21 20:10	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		05/21/21 11:00	05/21/21 20:10	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		05/21/21 11:00	05/21/21 20:10	1
Total BTEX	<0.00403	U	0.00403		mg/Kg		05/21/21 11:00	05/21/21 20:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*126*		*70 - 130*	*05/21/21 11:00*	*05/21/21 20:10*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*05/21/21 11:00*	*05/21/21 20:10*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/21/21 14:45	05/22/21 23:38	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/21/21 14:45	05/22/21 23:38	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/21/21 14:45	05/22/21 23:38	1
Total TPH	<50.0	U	50.0		mg/Kg		05/21/21 14:45	05/22/21 23:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*98*		*70 - 130*	*05/21/21 14:45*	*05/22/21 23:38*	*1*
o-Terphenyl	*100*		*70 - 130*	*05/21/21 14:45*	*05/22/21 23:38*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**20.4**		5.03		mg/Kg			05/22/21 15:53	1

Client Sample ID: PS-6 (0-0.5)
Lab Sample ID: 820-756-11
Date Collected: 05/18/21 12:50
Matrix: Solid
Date Received: 05/20/21 09:35
Sample Depth: 0' - 0.5'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U F2	0.00199		mg/Kg		05/25/21 10:00	05/25/21 15:22	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/24/21 13:00	05/25/21 01:41	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/24/21 13:00	05/25/21 01:41	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/24/21 13:00	05/25/21 01:41	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/24/21 13:00	05/25/21 01:41	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/24/21 13:00	05/25/21 01:41	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		05/24/21 13:00	05/25/21 01:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*	*05/24/21 13:00*	*05/25/21 01:41*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*05/24/21 13:00*	*05/25/21 01:41*	*1*

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Tex Mack 118

Job ID: 820-756-1

Client Sample ID: PS-6 (0-0.5)

Lab Sample ID: 820-756-11
Matrix: Solid
Date Collected: 05/18/21 12:50
Date Received: 05/20/21 09:35
Sample Depth: 0' - 0.5'

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/21/21 13:00	05/23/21 08:09	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/21/21 13:00	05/23/21 08:09	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/21/21 13:00	05/23/21 08:09	1
Total TPH	<50.0	U	50.0		mg/Kg		05/21/21 13:00	05/23/21 08:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*122*		*70 - 130*	*05/21/21 13:00*	*05/23/21 08:09*	*1*
o-Terphenyl	*124*		*70 - 130*	*05/21/21 13:00*	*05/23/21 08:09*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			05/22/21 15:58	1

Client Sample ID: PS-6 (1.5-2)

Lab Sample ID: 820-756-12
Matrix: Solid
Date Collected: 05/18/21 12:55
Date Received: 05/20/21 09:35
Sample Depth: 1.5' - 2'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/21/21 11:00	05/21/21 22:18	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/21/21 11:00	05/21/21 22:18	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/21/21 11:00	05/21/21 22:18	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		05/21/21 11:00	05/21/21 22:18	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/21/21 11:00	05/21/21 22:18	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		05/21/21 11:00	05/21/21 22:18	1
Total BTEX	<0.00401	U	0.00401		mg/Kg		05/21/21 11:00	05/21/21 22:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*121*		*70 - 130*	*05/21/21 11:00*	*05/21/21 22:18*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*05/21/21 11:00*	*05/21/21 22:18*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/21/21 13:00	05/23/21 08:30	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/21/21 13:00	05/23/21 08:30	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/21/21 13:00	05/23/21 08:30	1
Total TPH	<50.0	U	50.0		mg/Kg		05/21/21 13:00	05/23/21 08:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*108*		*70 - 130*	*05/21/21 13:00*	*05/23/21 08:30*	*1*
o-Terphenyl	*107*		*70 - 130*	*05/21/21 13:00*	*05/23/21 08:30*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<4.98	U	4.98		mg/Kg			05/22/21 16:13	1

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Tex Mack 118

Job ID: 820-756-1

Client Sample ID: PS-7 (0-0.5)

Lab Sample ID: 820-756-13
Matrix: Solid
Date Collected: 05/18/21 13:00
Date Received: 05/20/21 09:35
Sample Depth: 0' - 0.5'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/21/21 11:00	05/21/21 22:44	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/21/21 11:00	05/21/21 22:44	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/21/21 11:00	05/21/21 22:44	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/21/21 11:00	05/21/21 22:44	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/21/21 11:00	05/21/21 22:44	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/21/21 11:00	05/21/21 22:44	1
Total BTEX	<0.00398	U	0.00398		mg/Kg		05/21/21 11:00	05/21/21 22:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*	*05/21/21 11:00*	*05/21/21 22:44*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*05/21/21 11:00*	*05/21/21 22:44*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/21/21 13:00	05/23/21 08:51	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/21/21 13:00	05/23/21 08:51	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/21/21 13:00	05/23/21 08:51	1
Total TPH	<49.9	U	49.9		mg/Kg		05/21/21 13:00	05/23/21 08:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*107*		*70 - 130*	*05/21/21 13:00*	*05/23/21 08:51*	*1*
o-Terphenyl	*106*		*70 - 130*	*05/21/21 13:00*	*05/23/21 08:51*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**7.95**		4.99		mg/Kg			05/22/21 16:19	1

Client Sample ID: PS-7 (1.5-2)

Lab Sample ID: 820-756-14
Matrix: Solid
Date Collected: 05/18/21 13:05
Date Received: 05/20/21 09:35
Sample Depth: 1.5' - 2'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/21/21 11:00	05/21/21 23:09	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/21/21 11:00	05/21/21 23:09	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/21/21 11:00	05/21/21 23:09	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/21/21 11:00	05/21/21 23:09	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/21/21 11:00	05/21/21 23:09	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/21/21 11:00	05/21/21 23:09	1
Total BTEX	<0.00398	U	0.00398		mg/Kg		05/21/21 11:00	05/21/21 23:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*70 - 130*	*05/21/21 11:00*	*05/21/21 23:09*	*1*
1,4-Difluorobenzene (Surr)	*78*		*70 - 130*	*05/21/21 11:00*	*05/21/21 23:09*	*1*

Client Sample Results

Client: Terracon Consulting Eng & Scientists Job ID: 820-756-1
Project/Site: Tex Mack 118

Client Sample ID: PS-7 (1.5-2)
Lab Sample ID: 820-756-14
Date Collected: 05/18/21 13:05
Matrix: Solid
Date Received: 05/20/21 09:35
Sample Depth: 1.5' - 2'

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/21/21 13:00	05/23/21 09:12	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/21/21 13:00	05/23/21 09:12	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/21/21 13:00	05/23/21 09:12	1
Total TPH	<50.0	U	50.0		mg/Kg		05/21/21 13:00	05/23/21 09:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*114*		*70 - 130*	*05/21/21 13:00*	*05/23/21 09:12*	*1*
o-Terphenyl	*113*		*70 - 130*	*05/21/21 13:00*	*05/23/21 09:12*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**84.9**		5.04		mg/Kg			05/22/21 16:34	1

Client Sample ID: PS-8 (0-0.5)
Lab Sample ID: 820-756-15
Date Collected: 05/18/21 13:10
Matrix: Solid
Date Received: 05/20/21 09:35
Sample Depth: 0' - 0.5'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		05/21/21 11:00	05/21/21 23:35	1
Toluene	<0.00201	U	0.00201		mg/Kg		05/21/21 11:00	05/21/21 23:35	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		05/21/21 11:00	05/21/21 23:35	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		05/21/21 11:00	05/21/21 23:35	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		05/21/21 11:00	05/21/21 23:35	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		05/21/21 11:00	05/21/21 23:35	1
Total BTEX	<0.00402	U	0.00402		mg/Kg		05/21/21 11:00	05/21/21 23:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*125*		*70 - 130*	*05/21/21 11:00*	*05/21/21 23:35*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*05/21/21 11:00*	*05/21/21 23:35*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/21/21 13:00	05/23/21 09:33	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/21/21 13:00	05/23/21 09:33	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/21/21 13:00	05/23/21 09:33	1
Total TPH	<49.9	U	49.9		mg/Kg		05/21/21 13:00	05/23/21 09:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*114*		*70 - 130*	*05/21/21 13:00*	*05/23/21 09:33*	*1*
o-Terphenyl	*114*		*70 - 130*	*05/21/21 13:00*	*05/23/21 09:33*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**44.3**		4.95		mg/Kg			05/22/21 16:39	1

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Tex Mack 118

Job ID: 820-756-1

Client Sample ID: PS-8 (1.5-2)

Date Collected: 05/18/21 13:15
Date Received: 05/20/21 09:35
Sample Depth: 1.5' - 2'

Lab Sample ID: 820-756-16

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/21/21 11:00	05/22/21 00:00	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/21/21 11:00	05/22/21 00:00	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/21/21 11:00	05/22/21 00:00	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		05/21/21 11:00	05/22/21 00:00	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/21/21 11:00	05/22/21 00:00	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		05/21/21 11:00	05/22/21 00:00	1
Total BTEX	<0.00401	U	0.00401		mg/Kg		05/21/21 11:00	05/22/21 00:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*122*		*70 - 130*	*05/21/21 11:00*	*05/22/21 00:00*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*05/21/21 11:00*	*05/22/21 00:00*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/21/21 13:00	05/23/21 09:54	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/21/21 13:00	05/23/21 09:54	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/21/21 13:00	05/23/21 09:54	1
Total TPH	<50.0	U	50.0		mg/Kg		05/21/21 13:00	05/23/21 09:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*114*		*70 - 130*	*05/21/21 13:00*	*05/23/21 09:54*	*1*
o-Terphenyl	*114*		*70 - 130*	*05/21/21 13:00*	*05/23/21 09:54*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**479**		5.05		mg/Kg			05/22/21 16:44	1

Surrogate Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Tex Mack 118

Job ID: 820-756-1

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
820-756-1	PS-1 (0-0.5)	131 S1+	82
820-756-1 MS	PS-1 (0-0.5)	113	95
820-756-1 MSD	PS-1 (0-0.5)	118	101
820-756-2	PS-1 (1.5-2)	135 S1+	95
820-756-3	PS-2 (0-0.5)	130	97
820-756-4	PS-2 (1.5-2)	120	96
820-756-5	PS-3 (0-0.5)	117	96
820-756-6	PS-3 (1.5-2)	120	100
820-756-7	PS-4 (0-0.5)	119	99
820-756-8	PS-4 (1.5-2)	114	96
820-756-9	PS-5 (0-0.5)	188 S1+	110
820-756-10	PS-5 (1.5-2)	126	102
820-756-11	PS-6 (0-0.5)	112	99
820-756-11 MS	PS-6 (0-0.5)	110	94
820-756-11 MS	PS-6 (0-0.5)	117	2 S1-
820-756-11 MSD	PS-6 (0-0.5)	132 S1+	87
820-756-11 MSD	PS-6 (0-0.5)	105	97
820-756-12	PS-6 (1.5-2)	121	99
820-756-13	PS-7 (0-0.5)	119	93
820-756-14	PS-7 (1.5-2)	88	78
820-756-15	PS-8 (0-0.5)	125	100
820-756-16	PS-8 (1.5-2)	122	99
LCS 880-3313/1-A	Lab Control Sample	147 S1+	68 S1-
LCS 880-3389/1-A	Lab Control Sample	107	92
LCS 880-3415/1-A	Lab Control Sample	129	84
LCSD 880-3313/2-A	Lab Control Sample Dup	118	92
LCSD 880-3389/2-A	Lab Control Sample Dup	99	88
LCSD 880-3415/2-A	Lab Control Sample Dup	105	98
MB 880-3313/5-A	Method Blank	81	80
MB 880-3388/8	Method Blank	107	93
MB 880-3389/5-A	Method Blank	108	91
MB 880-3415/5-A	Method Blank	109	94

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
820-756-1	PS-1 (0-0.5)	112	120
820-756-1 MS	PS-1 (0-0.5)	95	95
820-756-1 MSD	PS-1 (0-0.5)	104	101
820-756-2	PS-1 (1.5-2)	91	95
820-756-3	PS-2 (0-0.5)	112	115
820-756-4	PS-2 (1.5-2)	116	124
820-756-5	PS-3 (0-0.5)	95	99

Surrogate Summary

Client: Terracon Consulting Eng & Scientists Job ID: 820-756-1
Project/Site: Tex Mack 118

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)									
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)								
820-756-6	PS-3 (1.5-2)	114	120								
820-756-7	PS-4 (0-0.5)	114	117								
820-756-8	PS-4 (1.5-2)	109	104								
820-756-9	PS-5 (0-0.5)	107	107								
820-756-10	PS-5 (1.5-2)	98	100								
820-756-11	PS-6 (0-0.5)	122	124								
820-756-12	PS-6 (1.5-2)	108	107								
820-756-13	PS-7 (0-0.5)	107	106								
820-756-14	PS-7 (1.5-2)	114	113								
820-756-15	PS-8 (0-0.5)	114	114								
820-756-16	PS-8 (1.5-2)	114	114								
LCS 880-3319/2-A	Lab Control Sample	113	105								
LCS 880-3357/2-A	Lab Control Sample	109	94								
LCS 880-3359/2-A	Lab Control Sample	103	101								
LCSD 880-3319/3-A	Lab Control Sample Dup	112	105								
LCSD 880-3357/3-A	Lab Control Sample Dup	99	95								
LCSD 880-3359/3-A	Lab Control Sample Dup	109	109								
MB 880-3319/1-A	Method Blank	118	124								
MB 880-3357/1-A	Method Blank	1 S1-	2 S1-								
MB 880-3359/1-A	Method Blank	0.6 S1-	1 S1-								

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Tex Mack 118

Job ID: 820-756-1

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-3313/5-A
Matrix: Solid
Analysis Batch: 3336

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3313

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/21/21 11:00	05/21/21 15:57	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/21/21 11:00	05/21/21 15:57	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/21/21 11:00	05/21/21 15:57	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/21/21 11:00	05/21/21 15:57	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/21/21 11:00	05/21/21 15:57	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/21/21 11:00	05/21/21 15:57	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		05/21/21 11:00	05/21/21 15:57	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*81*		*70 - 130*	*05/21/21 11:00*	*05/21/21 15:57*	*1*
1,4-Difluorobenzene (Surr)	*80*		*70 - 130*	*05/21/21 11:00*	*05/21/21 15:57*	*1*

Lab Sample ID: LCS 880-3313/1-A
Matrix: Solid
Analysis Batch: 3336

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3313

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.1280		mg/Kg		128	70 - 130
Toluene	0.100	0.1121		mg/Kg		112	70 - 130
Ethylbenzene	0.100	0.1248		mg/Kg		125	70 - 130
m-Xylene & p-Xylene	0.200	0.2412		mg/Kg		121	70 - 130
o-Xylene	0.100	0.1155		mg/Kg		116	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*147*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*68*	*S1-*	*70 - 130*

Lab Sample ID: LCSD 880-3313/2-A
Matrix: Solid
Analysis Batch: 3336

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3313

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.100	0.1219		mg/Kg		122	70 - 130	5	35
Toluene	0.100	0.1023		mg/Kg		102	70 - 130	9	35
Ethylbenzene	0.100	0.1169		mg/Kg		117	70 - 130	6	35
m-Xylene & p-Xylene	0.200	0.2278		mg/Kg		114	70 - 130	6	35
o-Xylene	0.100	0.1057		mg/Kg		106	70 - 130	9	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*

Lab Sample ID: 820-756-1 MS
Matrix: Solid
Analysis Batch: 3336

Client Sample ID: PS-1 (0-0.5)
Prep Type: Total/NA
Prep Batch: 3313

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00200	U	0.0998	0.1156		mg/Kg		116	70 - 130

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Tex Mack 118

Job ID: 820-756-1

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 820-756-1 MS
Matrix: Solid
Analysis Batch: 3336

Client Sample ID: PS-1 (0-0.5)
Prep Type: Total/NA
Prep Batch: 3313

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Toluene	<0.00200	U	0.0998	0.09375		mg/Kg		94	70 - 130
Ethylbenzene	<0.00200	U	0.0998	0.1066		mg/Kg		107	70 - 130
m-Xylene & p-Xylene	<0.00400	U	0.200	0.2067		mg/Kg		104	70 - 130
o-Xylene	<0.00200	U	0.0998	0.09924		mg/Kg		99	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*

Lab Sample ID: 820-756-1 MSD
Matrix: Solid
Analysis Batch: 3336

Client Sample ID: PS-1 (0-0.5)
Prep Type: Total/NA
Prep Batch: 3313

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.100	0.1257		mg/Kg		125	70 - 130	8	35
Toluene	<0.00200	U	0.100	0.1187		mg/Kg		118	70 - 130	23	35
Ethylbenzene	<0.00200	U	0.100	0.1201		mg/Kg		120	70 - 130	12	35
m-Xylene & p-Xylene	<0.00400	U	0.200	0.2330		mg/Kg		116	70 - 130	12	35
o-Xylene	<0.00200	U	0.100	0.1098		mg/Kg		110	70 - 130	10	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: MB 880-3388/8
Matrix: Solid
Analysis Batch: 3388

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg			05/24/21 13:36	1
Toluene	<0.00200	U	0.00200		mg/Kg			05/24/21 13:36	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg			05/24/21 13:36	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg			05/24/21 13:36	1
o-Xylene	<0.00200	U	0.00200		mg/Kg			05/24/21 13:36	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg			05/24/21 13:36	1
Total BTEX	<0.00400	U	0.00400		mg/Kg			05/24/21 13:36	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*		*05/24/21 13:36*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*		*05/24/21 13:36*	*1*

Lab Sample ID: MB 880-3389/5-A
Matrix: Solid
Analysis Batch: 3388

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3389

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/24/21 13:00	05/25/21 01:12	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/24/21 13:00	05/25/21 01:12	1

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Tex Mack 118

Job ID: 820-756-1

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: MB 880-3389/5-A
Matrix: Solid
Analysis Batch: 3388

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3389

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/24/21 13:00	05/25/21 01:12	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/24/21 13:00	05/25/21 01:12	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/24/21 13:00	05/25/21 01:12	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/24/21 13:00	05/25/21 01:12	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		05/24/21 13:00	05/25/21 01:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*05/24/21 13:00*	*05/25/21 01:12*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*05/24/21 13:00*	*05/25/21 01:12*	*1*

Lab Sample ID: LCS 880-3389/1-A
Matrix: Solid
Analysis Batch: 3388

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3389

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.08576		mg/Kg		86	70 - 130
Toluene	0.100	0.1109		mg/Kg		111	70 - 130
Ethylbenzene	0.100	0.1129		mg/Kg		113	70 - 130
m-Xylene & p-Xylene	0.200	0.2336		mg/Kg		117	70 - 130
o-Xylene	0.100	0.1165		mg/Kg		117	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*

Lab Sample ID: LCSD 880-3389/2-A
Matrix: Solid
Analysis Batch: 3388

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3389

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.100	0.08076		mg/Kg		81	70 - 130	6	35
Toluene	0.100	0.1080		mg/Kg		108	70 - 130	3	35
Ethylbenzene	0.100	0.1103		mg/Kg		110	70 - 130	2	35
m-Xylene & p-Xylene	0.200	0.2257		mg/Kg		113	70 - 130	3	35
o-Xylene	0.100	0.1098		mg/Kg		110	70 - 130	6	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*

Lab Sample ID: 820-756-11 MS
Matrix: Solid
Analysis Batch: 3388

Client Sample ID: PS-6 (0-0.5)
Prep Type: Total/NA
Prep Batch: 3389

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00200	U F1	0.100	0.08179		mg/Kg		82	70 - 130
Toluene	<0.00200	U	0.100	0.08622		mg/Kg		86	70 - 130
Ethylbenzene	<0.00200	U	0.100	0.09371		mg/Kg		94	70 - 130

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Tex Mack 118

Job ID: 820-756-1

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 820-756-11 MS
Matrix: Solid
Analysis Batch: 3388

Client Sample ID: PS-6 (0-0.5)
Prep Type: Total/NA
Prep Batch: 3389

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
m-Xylene & p-Xylene	<0.00400	U	0.200	0.1810		mg/Kg		90	70 - 130
o-Xylene	<0.00200	U	0.100	0.1066		mg/Kg		106	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*

Lab Sample ID: 820-756-11 MSD
Matrix: Solid
Analysis Batch: 3388

Client Sample ID: PS-6 (0-0.5)
Prep Type: Total/NA
Prep Batch: 3389

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00200	U F1	0.0998	0.06302	F1	mg/Kg		63	70 - 130	26	35
Toluene	<0.00200	U	0.0998	0.08004		mg/Kg		80	70 - 130	7	35
Ethylbenzene	<0.00200	U	0.0998	0.09836		mg/Kg		99	70 - 130	5	35
m-Xylene & p-Xylene	<0.00400	U	0.200	0.1964		mg/Kg		98	70 - 130	8	35
o-Xylene	<0.00200	U	0.0998	0.1187		mg/Kg		119	70 - 130	11	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*132*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*

Lab Sample ID: MB 880-3415/5-A
Matrix: Solid
Analysis Batch: 3452

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3415

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/25/21 10:00	05/25/21 14:53	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/25/21 10:00	05/25/21 14:53	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/25/21 10:00	05/25/21 14:53	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/25/21 10:00	05/25/21 14:53	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/25/21 10:00	05/25/21 14:53	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/25/21 10:00	05/25/21 14:53	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		05/25/21 10:00	05/25/21 14:53	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*05/25/21 10:00*	*05/25/21 14:53*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*05/25/21 10:00*	*05/25/21 14:53*	*1*

Lab Sample ID: LCS 880-3415/1-A
Matrix: Solid
Analysis Batch: 3452

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3415

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.07949		mg/Kg		79	70 - 130
Toluene	0.100	0.1205		mg/Kg		120	70 - 130
Ethylbenzene	0.100	0.1323	*+	mg/Kg		132	70 - 130
m-Xylene & p-Xylene	0.200	0.2835	*+	mg/Kg		142	70 - 130

Eurofins Xenco, Lubbock

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Tex Mack 118

Job ID: 820-756-1

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: LCS 880-3415/1-A
Matrix: Solid
Analysis Batch: 3452

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3415

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
o-Xylene			0.100	0.1411	*+	mg/Kg		141	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*129*		*70 - 130*
1,4-Difluorobenzene (Surr)	*84*		*70 - 130*

Lab Sample ID: LCSD 880-3415/2-A
Matrix: Solid
Analysis Batch: 3452

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3415

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.1048		mg/Kg		105	70 - 130	27	35
Toluene			0.100	0.1178		mg/Kg		118	70 - 130	2	35
Ethylbenzene			0.100	0.1202		mg/Kg		120	70 - 130	10	35
m-Xylene & p-Xylene			0.200	0.2452		mg/Kg		123	70 - 130	14	35
o-Xylene			0.100	0.1206		mg/Kg		121	70 - 130	16	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*

Lab Sample ID: 820-756-11 MS
Matrix: Solid
Analysis Batch: 3452

Client Sample ID: PS-6 (0-0.5)
Prep Type: Total/NA
Prep Batch: 3415

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<0.00199	U F2	0.101	0.07367		mg/Kg		73	70 - 130		
Toluene	<0.00199	U F2	0.101	0.09159		mg/Kg		91	70 - 130		
Ethylbenzene	<0.00199	U F2 *+	0.101	0.1031		mg/Kg		102	70 - 130		
m-Xylene & p-Xylene	<0.00398	U F2 *+	0.202	0.2080		mg/Kg		103	70 - 130		
o-Xylene	<0.00199	U F2 *+	0.101	0.1060		mg/Kg		105	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*
1,4-Difluorobenzene (Surr)	*2*	*S1-*	*70 - 130*

Lab Sample ID: 820-756-11 MSD
Matrix: Solid
Analysis Batch: 3452

Client Sample ID: PS-6 (0-0.5)
Prep Type: Total/NA
Prep Batch: 3415

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00199	U F2	0.101	0.09317		mg/Kg		92	70 - 130	23	35
Toluene	<0.00199	U F2	0.101	0.1051		mg/Kg		104	70 - 130	14	35
Ethylbenzene	<0.00199	U F2 *+	0.101	0.1054		mg/Kg		105	70 - 130	2	35
m-Xylene & p-Xylene	<0.00398	U F2 *+	0.202	0.2165		mg/Kg		107	70 - 130	4	35
o-Xylene	<0.00199	U F2 *+	0.101	0.1061		mg/Kg		105	70 - 130	0	35

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Tex Mack 118

Job ID: 820-756-1

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 820-756-11 MSD
Matrix: Solid
Analysis Batch: 3452

Client Sample ID: PS-6 (0-0.5)
Prep Type: Total/NA
Prep Batch: 3415

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	105		70 - 130
1,4-Difluorobenzene (Surr)	97		70 - 130

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-3319/1-A
Matrix: Solid
Analysis Batch: 3367

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3319

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/21/21 09:00	05/23/21 01:12	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/21/21 09:00	05/23/21 01:12	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/21/21 09:00	05/23/21 01:12	1
Total TPH	<50.0	U	50.0		mg/Kg		05/21/21 09:00	05/23/21 01:12	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	118		70 - 130	05/21/21 09:00	05/23/21 01:12	1
o-Terphenyl	124		70 - 130	05/21/21 09:00	05/23/21 01:12	1

Lab Sample ID: LCS 880-3319/2-A
Matrix: Solid
Analysis Batch: 3367

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3319

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	876.0		mg/Kg		88	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1091		mg/Kg		109	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	113		70 - 130
o-Terphenyl	105		70 - 130

Lab Sample ID: LCSD 880-3319/3-A
Matrix: Solid
Analysis Batch: 3367

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3319

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	870.1		mg/Kg		87	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	1083		mg/Kg		108	70 - 130	1	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	112		70 - 130
o-Terphenyl	105		70 - 130

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Tex Mack 118

Job ID: 820-756-1

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: MB 880-3357/1-A
Matrix: Solid
Analysis Batch: 3365

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3357

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/21/21 14:45	05/22/21 13:21	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/21/21 14:45	05/22/21 13:21	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/21/21 14:45	05/22/21 13:21	1
Total TPH	<50.0	U	50.0		mg/Kg		05/21/21 14:45	05/22/21 13:21	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*1*	*S1-*	*70 - 130*	*05/21/21 14:45*	*05/22/21 13:21*	*1*
o-Terphenyl	*2*	*S1-*	*70 - 130*	*05/21/21 14:45*	*05/22/21 13:21*	*1*

Lab Sample ID: LCS 880-3357/2-A
Matrix: Solid
Analysis Batch: 3365

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3357

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1095		mg/Kg		110	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1158		mg/Kg		116	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*109*		*70 - 130*
o-Terphenyl	*94*		*70 - 130*

Lab Sample ID: LCSD 880-3357/3-A
Matrix: Solid
Analysis Batch: 3365

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3357

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	968.5		mg/Kg		97	70 - 130	12	20
Diesel Range Organics (Over C10-C28)			1000	1126		mg/Kg		113	70 - 130	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*99*		*70 - 130*
o-Terphenyl	*95*		*70 - 130*

Lab Sample ID: MB 880-3359/1-A
Matrix: Solid
Analysis Batch: 3365

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3359

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/21/21 15:04	05/23/21 00:20	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/21/21 15:04	05/23/21 00:20	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/21/21 15:04	05/23/21 00:20	1
Total TPH	<50.0	U	50.0		mg/Kg		05/21/21 15:04	05/23/21 00:20	1

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Tex Mack 118

Job ID: 820-756-1

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	0.6	S1-	70 - 130	05/21/21 15:04	05/23/21 00:20	1
o-Terphenyl	1	S1-	70 - 130	05/21/21 15:04	05/23/21 00:20	1

Lab Sample ID: LCS 880-3359/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 3365 — **Prep Batch: 3359**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	988.4		mg/Kg		99	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1206		mg/Kg		121	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	103		70 - 130
o-Terphenyl	101		70 - 130

Lab Sample ID: LCSD 880-3359/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 3365 — **Prep Batch: 3359**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1055		mg/Kg		105	70 - 130	7	20
Diesel Range Organics (Over C10-C28)			1000	1337	*+	mg/Kg		134	70 - 130	10	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	109		70 - 130
o-Terphenyl	109		70 - 130

Lab Sample ID: 820-756-1 MS — **Client Sample ID: PS-1 (0-0.5)**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 3365 — **Prep Batch: 3359**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	996	880.3		mg/Kg		87	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U *+	996	1139		mg/Kg		114	70 - 130		

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	95		70 - 130
o-Terphenyl	95		70 - 130

Lab Sample ID: 820-756-1 MSD — **Client Sample ID: PS-1 (0-0.5)**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 3365 — **Prep Batch: 3359**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	996	936.0		mg/Kg		92	70 - 130	6	20

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Tex Mack 118

Job ID: 820-756-1

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: 820-756-1 MSD
Matrix: Solid
Analysis Batch: 3365

Client Sample ID: PS-1 (0-0.5)
Prep Type: Total/NA
Prep Batch: 3359

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics (Over C10-C28)	<49.9	U *+	996	1226		mg/Kg		123	70 - 130	7	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*104*		*70 - 130*
o-Terphenyl	*101*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-3347/1-A
Matrix: Solid
Analysis Batch: 3375

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			05/22/21 14:30	1

Lab Sample ID: LCS 880-3347/2-A
Matrix: Solid
Analysis Batch: 3375

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	238.3		mg/Kg		95	90 - 110

Lab Sample ID: LCSD 880-3347/3-A
Matrix: Solid
Analysis Batch: 3375

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	233.5		mg/Kg		93	90 - 110	2	20

Lab Sample ID: 820-756-1 MS
Matrix: Solid
Analysis Batch: 3375

Client Sample ID: PS-1 (0-0.5)
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	<4.97	U	249	254.0		mg/Kg		100	90 - 110

Lab Sample ID: 820-756-1 MSD
Matrix: Solid
Analysis Batch: 3375

Client Sample ID: PS-1 (0-0.5)
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	<4.97	U	249	252.0		mg/Kg		100	90 - 110	1	20

Lab Sample ID: 820-756-11 MS
Matrix: Solid
Analysis Batch: 3375

Client Sample ID: PS-6 (0-0.5)
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	<5.00	U	250	247.1		mg/Kg		97	90 - 110

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Tex Mack 118

Job ID: 820-756-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 820-756-11 MSD
Matrix: Solid
Analysis Batch: 3375

Client Sample ID: PS-6 (0-0.5)
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	<5.00	U	250	245.1		mg/Kg		97	90 - 110	1	20

Lab Sample ID: MB 880-3519/1-A
Matrix: Solid
Analysis Batch: 3522

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			05/26/21 13:14	1

Lab Sample ID: LCS 880-3519/2-A
Matrix: Solid
Analysis Batch: 3522

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	242.4		mg/Kg		97	90 - 110		

Lab Sample ID: LCSD 880-3519/3-A
Matrix: Solid
Analysis Batch: 3522

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	241.4		mg/Kg		97	90 - 110	0	20

QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Tex Mack 118

Job ID: 820-756-1

GC VOA

Prep Batch: 3313

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-756-1	PS-1 (0-0.5)	Total/NA	Solid	5035	
820-756-2	PS-1 (1.5-2)	Total/NA	Solid	5035	
820-756-3	PS-2 (0-0.5)	Total/NA	Solid	5035	
820-756-4	PS-2 (1.5-2)	Total/NA	Solid	5035	
820-756-5	PS-3 (0-0.5)	Total/NA	Solid	5035	
820-756-6	PS-3 (1.5-2)	Total/NA	Solid	5035	
820-756-7	PS-4 (0-0.5)	Total/NA	Solid	5035	
820-756-8	PS-4 (1.5-2)	Total/NA	Solid	5035	
820-756-9	PS-5 (0-0.5)	Total/NA	Solid	5035	
820-756-10	PS-5 (1.5-2)	Total/NA	Solid	5035	
820-756-12	PS-6 (1.5-2)	Total/NA	Solid	5035	
820-756-13	PS-7 (0-0.5)	Total/NA	Solid	5035	
820-756-14	PS-7 (1.5-2)	Total/NA	Solid	5035	
820-756-15	PS-8 (0-0.5)	Total/NA	Solid	5035	
820-756-16	PS-8 (1.5-2)	Total/NA	Solid	5035	
MB 880-3313/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-3313/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-3313/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
820-756-1 MS	PS-1 (0-0.5)	Total/NA	Solid	5035	
820-756-1 MSD	PS-1 (0-0.5)	Total/NA	Solid	5035	

Analysis Batch: 3336

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-756-1	PS-1 (0-0.5)	Total/NA	Solid	8021B	3313
820-756-2	PS-1 (1.5-2)	Total/NA	Solid	8021B	3313
820-756-3	PS-2 (0-0.5)	Total/NA	Solid	8021B	3313
820-756-4	PS-2 (1.5-2)	Total/NA	Solid	8021B	3313
820-756-5	PS-3 (0-0.5)	Total/NA	Solid	8021B	3313
820-756-6	PS-3 (1.5-2)	Total/NA	Solid	8021B	3313
820-756-7	PS-4 (0-0.5)	Total/NA	Solid	8021B	3313
820-756-8	PS-4 (1.5-2)	Total/NA	Solid	8021B	3313
820-756-9	PS-5 (0-0.5)	Total/NA	Solid	8021B	3313
820-756-10	PS-5 (1.5-2)	Total/NA	Solid	8021B	3313
820-756-12	PS-6 (1.5-2)	Total/NA	Solid	8021B	3313
820-756-13	PS-7 (0-0.5)	Total/NA	Solid	8021B	3313
820-756-14	PS-7 (1.5-2)	Total/NA	Solid	8021B	3313
820-756-15	PS-8 (0-0.5)	Total/NA	Solid	8021B	3313
820-756-16	PS-8 (1.5-2)	Total/NA	Solid	8021B	3313
MB 880-3313/5-A	Method Blank	Total/NA	Solid	8021B	3313
LCS 880-3313/1-A	Lab Control Sample	Total/NA	Solid	8021B	3313
LCSD 880-3313/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	3313
820-756-1 MS	PS-1 (0-0.5)	Total/NA	Solid	8021B	3313
820-756-1 MSD	PS-1 (0-0.5)	Total/NA	Solid	8021B	3313

Analysis Batch: 3388

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-756-11	PS-6 (0-0.5)	Total/NA	Solid	8021B	3389
MB 880-3388/8	Method Blank	Total/NA	Solid	8021B	
MB 880-3389/5-A	Method Blank	Total/NA	Solid	8021B	3389
LCS 880-3389/1-A	Lab Control Sample	Total/NA	Solid	8021B	3389
LCSD 880-3389/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	3389

QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Tex Mack 118

Job ID: 820-756-1

GC VOA (Continued)

Analysis Batch: 3388 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-756-11 MS	PS-6 (0-0.5)	Total/NA	Solid	8021B	3389
820-756-11 MSD	PS-6 (0-0.5)	Total/NA	Solid	8021B	3389

Prep Batch: 3389

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-756-11	PS-6 (0-0.5)	Total/NA	Solid	5035	
MB 880-3389/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-3389/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-3389/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
820-756-11 MS	PS-6 (0-0.5)	Total/NA	Solid	5035	
820-756-11 MSD	PS-6 (0-0.5)	Total/NA	Solid	5035	

Prep Batch: 3415

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-756-11	PS-6 (0-0.5)	Total/NA	Solid	5035	
MB 880-3415/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-3415/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-3415/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
820-756-11 MS	PS-6 (0-0.5)	Total/NA	Solid	5035	
820-756-11 MSD	PS-6 (0-0.5)	Total/NA	Solid	5035	

Analysis Batch: 3452

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-756-11	PS-6 (0-0.5)	Total/NA	Solid	8021B	3415
MB 880-3415/5-A	Method Blank	Total/NA	Solid	8021B	3415
LCS 880-3415/1-A	Lab Control Sample	Total/NA	Solid	8021B	3415
LCSD 880-3415/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	3415
820-756-11 MS	PS-6 (0-0.5)	Total/NA	Solid	8021B	3415
820-756-11 MSD	PS-6 (0-0.5)	Total/NA	Solid	8021B	3415

GC Semi VOA

Prep Batch: 3319

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-756-11	PS-6 (0-0.5)	Total/NA	Solid	8015NM Prep	
820-756-12	PS-6 (1.5-2)	Total/NA	Solid	8015NM Prep	
820-756-13	PS-7 (0-0.5)	Total/NA	Solid	8015NM Prep	
820-756-14	PS-7 (1.5-2)	Total/NA	Solid	8015NM Prep	
820-756-15	PS-8 (0-0.5)	Total/NA	Solid	8015NM Prep	
820-756-16	PS-8 (1.5-2)	Total/NA	Solid	8015NM Prep	
MB 880-3319/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-3319/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-3319/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Prep Batch: 3357

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-756-5	PS-3 (0-0.5)	Total/NA	Solid	8015NM Prep	
820-756-6	PS-3 (1.5-2)	Total/NA	Solid	8015NM Prep	
820-756-7	PS-4 (0-0.5)	Total/NA	Solid	8015NM Prep	
820-756-8	PS-4 (1.5-2)	Total/NA	Solid	8015NM Prep	
820-756-9	PS-5 (0-0.5)	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Tex Mack 118

Job ID: 820-756-1

GC Semi VOA (Continued)

Prep Batch: 3357 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-756-10	PS-5 (1.5-2)	Total/NA	Solid	8015NM Prep	
MB 880-3357/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-3357/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-3357/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Prep Batch: 3359

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-756-1	PS-1 (0-0.5)	Total/NA	Solid	8015NM Prep	
820-756-2	PS-1 (1.5-2)	Total/NA	Solid	8015NM Prep	
820-756-3	PS-2 (0-0.5)	Total/NA	Solid	8015NM Prep	
820-756-4	PS-2 (1.5-2)	Total/NA	Solid	8015NM Prep	
MB 880-3359/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-3359/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-3359/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
820-756-1 MS	PS-1 (0-0.5)	Total/NA	Solid	8015NM Prep	
820-756-1 MSD	PS-1 (0-0.5)	Total/NA	Solid	8015NM Prep	

Analysis Batch: 3365

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-756-1	PS-1 (0-0.5)	Total/NA	Solid	8015B NM	3359
820-756-2	PS-1 (1.5-2)	Total/NA	Solid	8015B NM	3359
820-756-3	PS-2 (0-0.5)	Total/NA	Solid	8015B NM	3359
820-756-4	PS-2 (1.5-2)	Total/NA	Solid	8015B NM	3359
820-756-5	PS-3 (0-0.5)	Total/NA	Solid	8015B NM	3357
820-756-6	PS-3 (1.5-2)	Total/NA	Solid	8015B NM	3357
820-756-7	PS-4 (0-0.5)	Total/NA	Solid	8015B NM	3357
820-756-8	PS-4 (1.5-2)	Total/NA	Solid	8015B NM	3357
820-756-9	PS-5 (0-0.5)	Total/NA	Solid	8015B NM	3357
820-756-10	PS-5 (1.5-2)	Total/NA	Solid	8015B NM	3357
MB 880-3357/1-A	Method Blank	Total/NA	Solid	8015B NM	3357
MB 880-3359/1-A	Method Blank	Total/NA	Solid	8015B NM	3359
LCS 880-3357/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	3357
LCS 880-3359/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	3359
LCSD 880-3357/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	3357
LCSD 880-3359/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	3359
820-756-1 MS	PS-1 (0-0.5)	Total/NA	Solid	8015B NM	3359
820-756-1 MSD	PS-1 (0-0.5)	Total/NA	Solid	8015B NM	3359

Analysis Batch: 3367

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-756-11	PS-6 (0-0.5)	Total/NA	Solid	8015B NM	3319
820-756-12	PS-6 (1.5-2)	Total/NA	Solid	8015B NM	3319
820-756-13	PS-7 (0-0.5)	Total/NA	Solid	8015B NM	3319
820-756-14	PS-7 (1.5-2)	Total/NA	Solid	8015B NM	3319
820-756-15	PS-8 (0-0.5)	Total/NA	Solid	8015B NM	3319
820-756-16	PS-8 (1.5-2)	Total/NA	Solid	8015B NM	3319
MB 880-3319/1-A	Method Blank	Total/NA	Solid	8015B NM	3319
LCS 880-3319/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	3319
LCSD 880-3319/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	3319

QC Association Summary

Client: Terracon Consulting Eng & Scientists
Job ID: 820-756-1
Project/Site: Tex Mack 118

HPLC/IC

Leach Batch: 3347

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-756-1	PS-1 (0-0.5)	Soluble	Solid	DI Leach	
820-756-2	PS-1 (1.5-2)	Soluble	Solid	DI Leach	
820-756-3	PS-2 (0-0.5)	Soluble	Solid	DI Leach	
820-756-4	PS-2 (1.5-2)	Soluble	Solid	DI Leach	
820-756-5	PS-3 (0-0.5)	Soluble	Solid	DI Leach	
820-756-6	PS-3 (1.5-2)	Soluble	Solid	DI Leach	
820-756-7	PS-4 (0-0.5)	Soluble	Solid	DI Leach	
820-756-8	PS-4 (1.5-2)	Soluble	Solid	DI Leach	
820-756-9	PS-5 (0-0.5)	Soluble	Solid	DI Leach	
820-756-10	PS-5 (1.5-2)	Soluble	Solid	DI Leach	
820-756-11	PS-6 (0-0.5)	Soluble	Solid	DI Leach	
820-756-12	PS-6 (1.5-2)	Soluble	Solid	DI Leach	
820-756-13	PS-7 (0-0.5)	Soluble	Solid	DI Leach	
820-756-14	PS-7 (1.5-2)	Soluble	Solid	DI Leach	
820-756-15	PS-8 (0-0.5)	Soluble	Solid	DI Leach	
820-756-16	PS-8 (1.5-2)	Soluble	Solid	DI Leach	
MB 880-3347/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-3347/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-3347/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
820-756-1 MS	PS-1 (0-0.5)	Soluble	Solid	DI Leach	
820-756-1 MSD	PS-1 (0-0.5)	Soluble	Solid	DI Leach	
820-756-11 MS	PS-6 (0-0.5)	Soluble	Solid	DI Leach	
820-756-11 MSD	PS-6 (0-0.5)	Soluble	Solid	DI Leach	

Analysis Batch: 3375

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-756-1	PS-1 (0-0.5)	Soluble	Solid	300.0	3347
820-756-2	PS-1 (1.5-2)	Soluble	Solid	300.0	3347
820-756-3	PS-2 (0-0.5)	Soluble	Solid	300.0	3347
820-756-4	PS-2 (1.5-2)	Soluble	Solid	300.0	3347
820-756-5	PS-3 (0-0.5)	Soluble	Solid	300.0	3347
820-756-6	PS-3 (1.5-2)	Soluble	Solid	300.0	3347
820-756-7	PS-4 (0-0.5)	Soluble	Solid	300.0	3347
820-756-8	PS-4 (1.5-2)	Soluble	Solid	300.0	3347
820-756-9	PS-5 (0-0.5)	Soluble	Solid	300.0	3347
820-756-10	PS-5 (1.5-2)	Soluble	Solid	300.0	3347
820-756-11	PS-6 (0-0.5)	Soluble	Solid	300.0	3347
820-756-12	PS-6 (1.5-2)	Soluble	Solid	300.0	3347
820-756-13	PS-7 (0-0.5)	Soluble	Solid	300.0	3347
820-756-14	PS-7 (1.5-2)	Soluble	Solid	300.0	3347
820-756-15	PS-8 (0-0.5)	Soluble	Solid	300.0	3347
820-756-16	PS-8 (1.5-2)	Soluble	Solid	300.0	3347
MB 880-3347/1-A	Method Blank	Soluble	Solid	300.0	3347
LCS 880-3347/2-A	Lab Control Sample	Soluble	Solid	300.0	3347
LCSD 880-3347/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	3347
820-756-1 MS	PS-1 (0-0.5)	Soluble	Solid	300.0	3347
820-756-1 MSD	PS-1 (0-0.5)	Soluble	Solid	300.0	3347
820-756-11 MS	PS-6 (0-0.5)	Soluble	Solid	300.0	3347
820-756-11 MSD	PS-6 (0-0.5)	Soluble	Solid	300.0	3347

QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Tex Mack 118

Job ID: 820-756-1

HPLC/IC

Leach Batch: 3519

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-3519/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-3519/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-3519/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 3522

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-3519/1-A	Method Blank	Soluble	Solid	300.0	3519
LCS 880-3519/2-A	Lab Control Sample	Soluble	Solid	300.0	3519
LCSD 880-3519/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	3519

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: Tex Mack 118

Job ID: 820-756-1

Client Sample ID: PS-1 (0-0.5)
Date Collected: 05/18/21 12:00
Date Received: 05/20/21 09:35

Lab Sample ID: 820-756-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.0 g	5 mL	3313	05/21/21 11:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3336	05/21/21 16:22	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	3359	05/21/21 15:04	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3365	05/23/21 01:23	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	3347	05/21/21 11:27	CH	XEN MID
Soluble	Analysis	300.0		1			3375	05/22/21 14:45	SC	XEN MID

Client Sample ID: PS-1 (1.5-2)
Date Collected: 05/18/21 12:05
Date Received: 05/20/21 09:35

Lab Sample ID: 820-756-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	3313	05/21/21 11:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3336	05/21/21 16:47	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	3359	05/21/21 15:04	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3365	05/23/21 02:28	AJ	XEN MID
Soluble	Leach	DI Leach			5.04 g	50 mL	3347	05/21/21 11:27	CH	XEN MID
Soluble	Analysis	300.0		1			3375	05/22/21 15:01	SC	XEN MID

Client Sample ID: PS-2 (0-0.5)
Date Collected: 05/18/21 12:10
Date Received: 05/20/21 09:35

Lab Sample ID: 820-756-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	3313	05/21/21 11:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3336	05/21/21 17:13	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	3359	05/21/21 15:04	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3365	05/23/21 02:49	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	3347	05/21/21 11:27	CH	XEN MID
Soluble	Analysis	300.0		1			3375	05/22/21 15:06	SC	XEN MID

Client Sample ID: PS-2 (1.5-2)
Date Collected: 05/18/21 12:15
Date Received: 05/20/21 09:35

Lab Sample ID: 820-756-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	3313	05/21/21 11:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3336	05/21/21 17:38	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	3359	05/21/21 15:04	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3365	05/23/21 03:11	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	3347	05/21/21 11:27	CH	XEN MID
Soluble	Analysis	300.0		1			3375	05/22/21 15:11	SC	XEN MID

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: Tex Mack 118

Job ID: 820-756-1

Client Sample ID: PS-3 (0-0.5)
Date Collected: 05/18/21 12:20
Date Received: 05/20/21 09:35

Lab Sample ID: 820-756-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	3313	05/21/21 11:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3336	05/21/21 18:03	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	3357	05/21/21 14:45	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3365	05/22/21 21:51	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	3347	05/21/21 11:27	CH	XEN MID
Soluble	Analysis	300.0		1			3375	05/22/21 15:16	SC	XEN MID

Client Sample ID: PS-3 (1.5-2)
Date Collected: 05/18/21 12:25
Date Received: 05/20/21 09:35

Lab Sample ID: 820-756-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	3313	05/21/21 11:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3336	05/21/21 18:28	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	3357	05/21/21 14:45	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3365	05/22/21 22:12	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	3347	05/21/21 11:27	CH	XEN MID
Soluble	Analysis	300.0		1			3375	05/22/21 15:32	SC	XEN MID

Client Sample ID: PS-4 (0-0.5)
Date Collected: 05/18/21 12:30
Date Received: 05/20/21 09:35

Lab Sample ID: 820-756-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	3313	05/21/21 11:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3336	05/21/21 18:53	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	3357	05/21/21 14:45	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3365	05/22/21 22:34	AJ	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	3347	05/21/21 11:27	CH	XEN MID
Soluble	Analysis	300.0		1			3375	05/22/21 15:37	SC	XEN MID

Client Sample ID: PS-4 (1.5-2)
Date Collected: 05/18/21 12:35
Date Received: 05/20/21 09:35

Lab Sample ID: 820-756-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	3313	05/21/21 11:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3336	05/21/21 19:19	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	3357	05/21/21 14:45	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3365	05/22/21 22:55	AJ	XEN MID
Soluble	Leach	DI Leach			4.01 g	50 mL	3347	05/21/21 11:27	CH	XEN MID
Soluble	Analysis	300.0		1			3375	05/22/21 15:42	SC	XEN MID

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: Tex Mack 118

Job ID: 820-756-1

Client Sample ID: PS-5 (0-0.5)
Date Collected: 05/18/21 12:40
Date Received: 05/20/21 09:35

Lab Sample ID: 820-756-9
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	3313	05/21/21 11:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3336	05/21/21 19:45	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	3357	05/21/21 14:45	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3365	05/22/21 23:17	AJ	XEN MID
Soluble	Leach	DI Leach			4.97 g	50 mL	3347	05/21/21 11:27	CH	XEN MID
Soluble	Analysis	300.0		1			3375	05/22/21 15:48	SC	XEN MID

Client Sample ID: PS-5 (1.5-2)
Date Collected: 05/18/21 12:45
Date Received: 05/20/21 09:35

Lab Sample ID: 820-756-10
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	3313	05/21/21 11:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3336	05/21/21 20:10	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	3357	05/21/21 14:45	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3365	05/22/21 23:38	AJ	XEN MID
Soluble	Leach	DI Leach			4.97 g	50 mL	3347	05/21/21 11:27	CH	XEN MID
Soluble	Analysis	300.0		1			3375	05/22/21 15:53	SC	XEN MID

Client Sample ID: PS-6 (0-0.5)
Date Collected: 05/18/21 12:50
Date Received: 05/20/21 09:35

Lab Sample ID: 820-756-11
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	3389	05/24/21 13:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3388	05/25/21 01:41	MR	XEN MID
Total/NA	Prep	5035			5.03 g	5 mL	3415	05/25/21 10:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3452	05/25/21 15:22	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	3319	05/21/21 13:00	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3367	05/23/21 08:09	AJ	XEN MID
Soluble	Leach	DI Leach			5.00 g	50 mL	3347	05/21/21 11:27	CH	XEN MID
Soluble	Analysis	300.0		1			3375	05/22/21 15:58	SC	XEN MID

Client Sample ID: PS-6 (1.5-2)
Date Collected: 05/18/21 12:55
Date Received: 05/20/21 09:35

Lab Sample ID: 820-756-12
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	3313	05/21/21 11:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3336	05/21/21 22:18	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	3319	05/21/21 13:00	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3367	05/23/21 08:30	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	3347	05/21/21 11:27	CH	XEN MID
Soluble	Analysis	300.0		1			3375	05/22/21 16:13	SC	XEN MID

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: Tex Mack 118

Job ID: 820-756-1

Client Sample ID: PS-7 (0-0.5)
Date Collected: 05/18/21 13:00
Date Received: 05/20/21 09:35

Lab Sample ID: 820-756-13
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	3313	05/21/21 11:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3336	05/21/21 22:44	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	3319	05/21/21 13:00	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3367	05/23/21 08:51	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	3347	05/21/21 11:27	CH	XEN MID
Soluble	Analysis	300.0		1			3375	05/22/21 16:19	SC	XEN MID

Client Sample ID: PS-7 (1.5-2)
Date Collected: 05/18/21 13:05
Date Received: 05/20/21 09:35

Lab Sample ID: 820-756-14
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	3313	05/21/21 11:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3336	05/21/21 23:09	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	3319	05/21/21 13:00	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3367	05/23/21 09:12	AJ	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	3347	05/21/21 11:27	CH	XEN MID
Soluble	Analysis	300.0		1			3375	05/22/21 16:34	SC	XEN MID

Client Sample ID: PS-8 (0-0.5)
Date Collected: 05/18/21 13:10
Date Received: 05/20/21 09:35

Lab Sample ID: 820-756-15
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	3313	05/21/21 11:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3336	05/21/21 23:35	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	3319	05/21/21 13:00	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3367	05/23/21 09:33	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	3347	05/21/21 11:27	CH	XEN MID
Soluble	Analysis	300.0		1			3375	05/22/21 16:39	SC	XEN MID

Client Sample ID: PS-8 (1.5-2)
Date Collected: 05/18/21 13:15
Date Received: 05/20/21 09:35

Lab Sample ID: 820-756-16
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	3313	05/21/21 11:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3336	05/22/21 00:00	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	3319	05/21/21 13:00	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3367	05/23/21 09:54	AJ	XEN MID
Soluble	Leach	DI Leach			4.95 g	50 mL	3347	05/21/21 11:27	CH	XEN MID
Soluble	Analysis	300.0		1			3375	05/22/21 16:44	SC	XEN MID

Laboratory References:
XEN MID = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists Job ID: 820-756-1
Project/Site: Tex Mack 118

Laboratory: Eurofins Xenco, Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-20-21	06-30-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015B NM	8015NM Prep	Solid	Total TPH
8021B	5035	Solid	Total BTEX

Method Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Tex Mack 118

Job ID: 820-756-1

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XEN MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
5035	Closed System Purge and Trap	SW846	XEN MID
8015NM Prep	Microextraction	SW846	XEN MID
DI Leach	Deionized Water Leaching Procedure	ASTM	XEN MID

Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

XEN MID = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Tex Mack 118

Job ID: 820-756-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
820-756-1	PS-1 (0-0.5)	Solid	05/18/21 12:00	05/20/21 09:35	0' - 0.5'
820-756-2	PS-1 (1.5-2)	Solid	05/18/21 12:05	05/20/21 09:35	1.5' - 2'
820-756-3	PS-2 (0-0.5)	Solid	05/18/21 12:10	05/20/21 09:35	0' - 0.5'
820-756-4	PS-2 (1.5-2)	Solid	05/18/21 12:15	05/20/21 09:35	1.5' - 2'
820-756-5	PS-3 (0-0.5)	Solid	05/18/21 12:20	05/20/21 09:35	0' - 0.5'
820-756-6	PS-3 (1.5-2)	Solid	05/18/21 12:25	05/20/21 09:35	1.5' - 2'
820-756-7	PS-4 (0-0.5)	Solid	05/18/21 12:30	05/20/21 09:35	0' - 0.5'
820-756-8	PS-4 (1.5-2)	Solid	05/18/21 12:35	05/20/21 09:35	1.5' - 2'
820-756-9	PS-5 (0-0.5)	Solid	05/18/21 12:40	05/20/21 09:35	0' - 0.5'
820-756-10	PS-5 (1.5-2)	Solid	05/18/21 12:45	05/20/21 09:35	1.5' - 2'
820-756-11	PS-6 (0-0.5)	Solid	05/18/21 12:50	05/20/21 09:35	0' - 0.5'
820-756-12	PS-6 (1.5-2)	Solid	05/18/21 12:55	05/20/21 09:35	1.5' - 2'
820-756-13	PS-7 (0-0.5)	Solid	05/18/21 13:00	05/20/21 09:35	0' - 0.5'
820-756-14	PS-7 (1.5-2)	Solid	05/18/21 13:05	05/20/21 09:35	1.5' - 2'
820-756-15	PS-8 (0-0.5)	Solid	05/18/21 13:10	05/20/21 09:35	0' - 0.5'
820-756-16	PS-8 (1.5-2)	Solid	05/18/21 13:15	05/20/21 09:35	1.5' - 2'

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: J. Guesnier
SRS #:
Sampler's Signature

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE:
TEMP OF COOLER WHEN RECEIVED (°C): =9.3/9.2

Page 1 of 1

Project Number: AR207079
Project Name: Tex Mack 118

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 4 oz Glass	40 ml VOA	250 ml Poly	5035 kit	Chloride (EPA Method 300)	BTEX (EPA Method 8021B)	TPH Extended 8015	Lab Sample ID
S	5/18/2021	12:00		X	PS-1 SP1 (0-0.5)	0	0.5'	X				X	X	X	820-756-1
S	5/18/2021	12:05		X	PS-1 SP1 (1.5-2)	1.5'	2'	X				X	X	X	2
S	5/18/2021	12:10		X	PS-2 SP2 (0-0.5)	0	0.5'	X				X	X	X	3
S	5/18/2021	12:15		X	PS-2 SP2 (1.5-2)	1.5'	2'	X				X	X	X	4
S	5/18/2021	12:20		X	PS-3 SP3 (0-0.5)	0	0.5'	X				X	X	X	5
S	5/18/2021	12:25		X	PS-3 SP3 (1.5-2)	1.5'	2'	X				X	X	X	6
S	5/18/2021	12:30		X	PS-4 SP4 (0-0.5)	0	0.5'	X				X	X	X	7
S	5/18/2021	12:35		X	PS-4 SP4 (1.5-2)	1.5'	2'	X				X	X	X	8
S	5/18/2021	12:40		X	PS-5 SP5 (0-0.5)	0	0.5'	X				X	X	X	9
S	5/18/2021	12:45		X	PS-5 SP5 (1.5-2)	1.5'	2'	X				X	X	X	10
S	5/18/2021	12:50		X	PS-6 SP6 (0-0.5)	0	0.5'	X				X	X	X	11
S	5/18/2021	12:55		X	PS-6 SP6 (1.5-2)	1.5'	2'	X				X	X	X	12
S	5/18/2021	13:00		X	PS-7 SP7 (0-0.5)	0	0.5'	X				X	X	X	13
S	5/18/2021	13:05		X	PS-7 SP7 (1.5-2)	1.5'	2'	X				X	X	X	14
S	5/18/2021	13:10		X	PS-8 SP8 (0-0.5)	0	0.5'	X				X	X	X	15
S	5/18/2021	13:15		X	PS-8 SP8 (1.5-2)	1.5'	2'	X				X	X	X	16

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:
	5-2021	5:35		5/19/21	9:35

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 _____

Eurofins Xenco, Lubbock
6701 Aberdeen Ave Suite 8
Lubbock, TX 79424
Phone 806-794-1296

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Kramer, Jessica	Carrier Tracking No(s):	COC No: 820-1050 1
Client Contact: Shipping/Receiving	Phone:	E-Mail: jessica kramer@eurofinset.com	State of Origin: New Mexico	Page: Page 1 of 2
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Texas		Job #: 820-756-1
Address: 1211 W Florida Ave,	Due Date Requested: 5/24/2021			
City: Midland	TAT Requested (days):			
State Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email:	WO #:			
Project Name: Tex Mack 118-AR207079--Terracon	Project #: 82000268			
Site:	SSOW#:			

Analysis Requested

Preservation Codes

A - HCL, B - NaOH, C Zn Acetate, D - Nitric Acid, E NaHSO4, F - MeOH, G Amchlor, H - Ascorbic Acid, I Ice, J - DI Water, K EDTA, L EDA, M - Hexane, N - None, O AsNaO2, P - Na2O4S, Q Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W pH 4-5, Z other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6021B/5035FP_Calc BTEX	8015MOD_NM/8015NM_S_Prep Full TPH	300_ORGFM_28D/DI_LEACH Chloride	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
PS-1 (0-0 5) (820-756-1)	5/18/21	12 00 Mountain		Solid			X	X	X	1	
PS-1 (1 5-2) (820-756-2)	5/18/21	12 05 Mountain		Solid			X	X	X	1	
PS-2 (0-0 5) (820-756-3)	5/18/21	12 10 Mountain		Solid			X	X	X	1	
PS-2 (1 5-2) (820-756-4)	5/18/21	12.15 Mountain		Solid			X	X	X	1	
PS-3 (0-0 5) (820-756-5)	5/18/21	12 20 Mountain		Solid			X	X	X	1	
PS-3 (1 5-2) (820-756-6)	5/18/21	12 25 Mountain		Solid			X	X	X	1	
PS-4 (0-0 5) (820-756-7)	5/18/21	12 30 Mountain		Solid			X	X	X	1	
PS-4 (1 5-2) (820-756-8)	5/18/21	12.35 Mountain		Solid			X	X	X	1	
PS-5 (0-0 5) (820-756-9)	5/18/21	12 40 Mountain		Solid			X	X	X	1	

Note: Since laboratory accreditations are subject to change Eurofins Xenco LLC places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Xenco LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Xenco LLC attention immediately If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins Xenco LLC.

Possible Hazard Identification	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)***
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III IV, Other (specify) Primary Deliverable Rank. 2	Special Instructions/QC Requirements

Empty Kit Relinquished by:	Date	Time	Method of Shipment:

Relinquished by:	Date/Time: 5/20/21 10:35	Company	Received by:	Date/Time: 5-21-21 11:000m	Company
Relinquished by:	Date/Time	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks.

Ver: 11/01/2020

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists Job Number: 820-756-1

Login Number: 756 **List Source: Eurofins Xenco, Lubbock**
List Number: 1
Creator: Turner, Michael

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists Job Number: 820-756-1

Login Number: 756 **List Source: Eurofins Xenco, Midland**
List Number: 2 **List Creation: 05/21/21 11:15 AM**
Creator: Copeland, Tatiana

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

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

Standard of Care

Terracon's services were performed in a manner consistent with generally accepted practices of the profession undertaken in similar studies in the same geographical area during the same time. Terracon makes no warranties, either express or implied, regarding the findings, conclusions, or recommendations. Please note that Terracon does not warrant the work of laboratories, regulatory agencies, or other third parties supplying information used in the preparation of the report. These services were performed in accordance with the scope of work agreed with you, Spur Energy Partners, as reflected in our proposal (PA207079).

Additional Scope Limitations

The development of this Closure Report 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 recommendations are based solely upon reformation executed within the scope of these services.

Reliance

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

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1220 S. St Francis Dr.
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QUESTIONS

Action 424431

QUESTIONS

Operator: Spur Energy Partners LLC 9655 Katy Freeway Houston, TX 77024	OGRID: 328947
	Action Number: 424431
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nRM2008551917**
Incident Name	**NRM2008551917 TEX MACK 11 FEDERAL #118H @ 30-015-41272**
Incident Type	**Produced Water Release**
Incident Status	**Remediation Closure Report Received**
Incident Well	**[30-015-41272] TEX MACK 11 FEDERAL #118H**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	TEX MACK 11 FEDERAL #118H
Date Release Discovered	03/18/2020
Surface Owner	Federal

Incident Details	
Please answer all the questions in this group.	
Incident Type	Produced Water Release
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.	
Crude Oil Released (bbls) Details	*Not answered.*
Produced Water Released (bbls) Details	Cause: Corrosion | Flow Line - Production | Produced Water | Released: 8 BBL | Recovered: 3 BBL | Lost: 5 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	No
Condensate Released (bbls) Details	*Not answered.*
Natural Gas Vented (Mcf) Details	*Not answered.*
Natural Gas Flared (Mcf) Details	*Not answered.*
Other Released Details	*Not answered.*
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	CORROSION OF FLOW LINE CAUSED PW RELEASE

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QUESTIONS (continued)

Operator: Spur Energy Partners LLC 9655 Katy Freeway Houston, TX 77024	OGRID: 328947
	Action Number: 424431
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	**No, according to supplied volumes this does not appear to be a "gas only" report.**
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	**No**
Reasons why this would be considered a submission for a notification of a major release	*Unavailable.*
With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.	

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	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	N/A
Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.	

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.

I hereby agree and sign off to the above statement	Name: Katherine Purvis Title: EHS Coordinator Email: katherine.purvis@spurenergy.com Date: 01/24/2025

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QUESTIONS (continued)

Operator: Spur Energy Partners LLC 9655 Katy Freeway Houston, TX 77024	OGRID: 328947
	Action Number: 424431
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Site Characterization	
Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). 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 in feet below ground surface (ft bgs)	Between 75 and 100 (ft.)
What method was used to determine the depth to ground water	NM OSE iWaters Database Search
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Greater than 5 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Greater than 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Greater than 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Greater than 5 (mi.)
Any other fresh water well or spring	Greater than 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between 1 and 5 (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Greater than 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Low
A 100-year floodplain	Between 1 and 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	Yes

Remediation Plan	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
Requesting a remediation plan approval with this submission	Yes
Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)	
Chloride (EPA 300.0 or SM4500 Cl B)	12900
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	21300
GRO+DRO (EPA SW-846 Method 8015M)	19520
BTEX (EPA SW-846 Method 8021B or 8260B)	670
Benzene (EPA SW-846 Method 8021B or 8260B)	19.9
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
On what estimated date will the remediation commence	05/14/2020
On what date will (or did) the final sampling or liner inspection occur	10/04/2023
On what date will (or was) the remediation complete(d)	10/04/2023
What is the estimated surface area (in square feet) that will be reclaimed	1000
What is the estimated volume (in cubic yards) that will be reclaimed	200
What is the estimated surface area (in square feet) that will be remediated	1000
What is the estimated volume (in cubic yards) that will be remediated	200
These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.	
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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QUESTIONS (continued)

Operator: Spur Energy Partners LLC 9655 Katy Freeway Houston, TX 77024	OGRID: 328947
	Action Number: 424431
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Remediation Plan (continued)	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:	
(Select all answers below that apply.)	
(Ex Situ) Excavation and **off-site** disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for **off-site** disposal	LEA LAND LANDFILL [fEEM0112342028]
OR which OCD approved well (API) will be used for **off-site** disposal	*Not answered.*
OR is the **off-site** disposal site, to be used, out-of-state	*Not answered.*
OR is the **off-site** disposal site, to be used, an NMED facility	*Not answered.*
(Ex Situ) Excavation and **on-site** remediation (i.e. On-Site Land Farms)	*Not answered.*
(In Situ) Soil Vapor Extraction	*Not answered.*
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	*Not answered.*
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	*Not answered.*
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	*Not answered.*
Ground Water Abatement pursuant to 19.15.30 NMAC	*Not answered.*
OTHER (Non-listed remedial process)	*Not answered.*
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
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.	
I hereby agree and sign off to the above statement	Name: Katherine Purvis Title: EHS Coordinator Email: katherine.purvis@spurenergy.com Date: 01/24/2025
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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QUESTIONS (continued)

Operator: Spur Energy Partners LLC 9655 Katy Freeway Houston, TX 77024	OGRID: 328947
	Action Number: 424431
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Deferral Requests Only	
Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.	
Requesting a deferral of the remediation closure due date with the approval of this submission	No

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QUESTIONS (continued)

Operator: Spur Energy Partners LLC 9655 Katy Freeway Houston, TX 77024	OGRID: 328947
	Action Number: 424431
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	**424429**
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	**10/04/2023**
What was the (estimated) number of samples that were to be gathered	**10**
What was the sampling surface area in square feet	**1000**

Remediation Closure Request	
Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.	
Requesting a remediation closure approval with this submission	Yes
Have the lateral and vertical extents of contamination been fully delineated	**Yes**
Was this release entirely contained within a lined containment area	**No**
All areas reasonably needed for production or subsequent drilling operations have been stabilized, returned to the sites existing grade, and have a soil cover that prevents ponding of water, minimizing dust and erosion	Yes
What was the total surface area (in square feet) remediated	1000
What was the total volume (cubic yards) remediated	200
All areas not reasonably needed for production or subsequent drilling operations have been reclaimed to contain a minimum of four feet of non-waste contain earthen material with concentrations less than 600 mg/kg chlorides, 100 mg/kg TPH, 50 mg/kg BTEX, and 10 mg/kg Benzene	Yes
What was the total surface area (in square feet) reclaimed	1000
What was the total volume (in cubic yards) reclaimed	200
Summarize any additional remediation activities not included by answers (above)	ALL CONTAMINATED SOIL HAS BEEN REMOVED AND TESTED TO MEET THE STRICTEST NMOCD STANDARDS

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 (in .pdf format) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

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

I hereby agree and sign off to the above statement	Name: Katherine Purvis Title: EHS Coordinator Email: katherine.purvis@spurenergy.com Date: 01/24/2025

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QUESTIONS (continued)

Operator:	OGRID:
Spur Energy Partners LLC 9655 Katy Freeway Houston, TX 77024	328947
	Action Number: 424431
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Reclamation Report	
Only answer the questions in this group if all reclamation steps have been completed.	
Requesting a reclamation approval with this submission	No

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CONDITIONS

Operator: Spur Energy Partners LLC 9655 Katy Freeway Houston, TX 77024	OGRID: 328947
	Action Number: 424431
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	We have received your Remediation Closure Report for Incident #NRM2008551917 TEX MACK 11 FEDERAL #118H, thank you. This Remediation Closure Report is approved.	2/6/2025