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	NAB1919955454
District RP	2RP-5537
Facility ID	
Application ID	pAB1919955186

Release Notification

Responsible Party

Responsible Party XTO Energy	OGRID 5380
Contact Name Kyle Littrell	Contact Telephone 432-221-7331
Contact email Kyle_Littrell@xtoenergy.com	Incident # *(assigned by OCD)* NAB1919955454
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.150097° Longitude -103.991664°
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Pickett Draw Federal #001	Site Type Production Well Facility
Date Release Discovered 6/21/2019	API# *(if applicable)* 30-015-25767

Unit Letter	Section	Township	Range	County
C	9	25S	29E	Eddy

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

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) 5.96	Volume Recovered (bbls) 5
☒ Produced Water	Volume Released (bbls) 589.58	Volume Recovered (bbls) 495
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

Flowline failed due to pressure communication with the Pickett Draw Federal #1 from hydraulic frac operations for the Corral Canyon Federal Com 6H well. Fluids were released to the well pad and pasture to the NW (approx 60 ft) and misting to the NE (approx 180 ft). Vacuum trucks recovered free fluids. Additional third party resources have been retained to assist with remediation.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NAB1919955454
District RP	2RP-5537
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Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? An unauthorized release of a volume of 25 barrels or more

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?
Notice provided by Bryan Foust to Mike Bratcher, Rob Hamlet, Victoria Venegas, and Jim Griswold (NMOCD), and Jim Amos and Deborah McKinney (BLM), on 6/22/2019 by email

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:
N/A

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: Amy C. Ruth
Title: SH&E Coordinator
Signature:
Date: 7/2/2019
email: Amy_Ruth@xtoenergy.com
Telephone: 575-689-3380

OCD Only

Received by: Amalia Bustamante
Date: 7/18/2019

State of New Mexico
Oil Conservation Division

Incident ID	NAB1919955454
District RP	
Facility ID	2RP-5537
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?	51-100 (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.

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	2RP-5537
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: Kyle Littrell Title: SH&E Supervisor

Signature: Date:

email: Kyle_Littrell@xtoenergy.com Telephone: (432)-221-7331

OCD Only

Received by: Date:

Form C-141
Page 5

State of New Mexico
Oil Conservation Division

Incident ID	NAB1919955454
District RP	
Facility ID	2RP-5537
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: Kyle Littrell Title: SH&E Supervisor

Signature: Date:

email: Kyle_Littrell@xtoenergy.com Telephone: (432)-221-7331

OCD Only

Received by: Date:

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

Signature: Date:

State of New Mexico
Oil Conservation Division

Incident ID	NAB1919955454
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.***

[X] A scaled site and sampling diagram as described in 19.15.29.11 NMAC

[X] 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)

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

[X] 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: Garrett Green Title: SSHE Coordinator

Signature: Date: 9/22/2023

email: garrett.green@exxonmobil.com Telephone: 575-200-00729

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:

ENSOLUM

September 22, 2023

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

Re: Closure Request
Pickett Draw Federal #001
Incident Number NAB1919955454
Eddy County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of XTO Energy, Inc (XTO), has prepared this *Closure Request* to document excavation and confirmation soil sampling activities performed at the Pickett Draw Federal #001 (Site) following an approved *Deferral Request* and subsequent plugging and abandonment of the production well and reclamation of the well pad. Based on field observations and laboratory analytical results following excavation of residually impacted soil, XTO is submitting this *Closure Request* describing additional excavation activities that have occurred and requesting no further action for Incident Number NAB1919955454.

SITE DESCRIPTION AND BACKGROUND

The Site is located in Unit C, Section 9, Township 25 South, Range 29 East, in Eddy County, New Mexico (32.150097°, -103.991664°; Figure 1) and is associated with oil and gas exploration and production operations on Federal Land managed by the Bureau of Land Management (BLM).

On June 21, 2019, a flowline failed due to the pressure communication with the Site's equipment from hydraulic fracturing operations for a nearby production well. Fluids were released to the well pad and pasture resulting in the release of 5.96 barrels (bbls) of crude oil and 589.58 bbls of produced water. A vacuum truck was immediately dispatched to the Site to recover free-standing fluids; 5 bbls of crude oil and 495 bbls were recovered. XTO reported the release to NMOCD via email on June 22, 2019, and submitted a Release Notification Form C-141 (Form C-141) on July 2, 2019. The release was assigned Incident Number NAB1919955454.

XTO retained LT Environmental, Inc. (LTE) to assess and remediate the Site. Following initial assessment and remediation efforts, a *Deferral Request* was submitted to NMOCD September 19, 2019, which was denied on October 28, 2019, by NMOCD for not agreeing with the naturally occurring chloride concentration evaluation included in the *Deferral Request*. Additional background chloride concentration assessment was completed by LTE, which identified naturally occurring chloride concentrations ranging from less than (<) 9.88 milligrams per kilogram (mg/kg) to 4,330 mg/kg due to the heterogeneity of soil in this region. The conclusions of the study regarding naturally occurring chloride at the Site were agreed to by NMOCD on March 31, 2020, with the approval of the *Deferral Request Addendum*, which is included in Appendix A.

XTO has plugged and abandoned the production well and has removed all equipment in preparation of reclamation of the well pad. As such, the deferred areas in the vicinity of confirmation sidewall soil

samples SW05 and SW12 could be safely accessed to remediate residual total petroleum hydrocarbon (TPH) impacted soil. Results of the additional remedial actions are described below. All previous documentation related to Incident Number NAB1919955454 are available on NMOCD's web portal.

CLOSURE CRITERIA

The Site was characterized to determine the applicability of Table I, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29, (19.15.29) of the New Mexico Administrative Code (NMAC). Results from the characterization desktop review are presented on page 3 of the Form C-141, Site Assessment/Characterization and field investigation of naturally occuring chloride in soil was presented in the December 2019 *Deferral Request Addendum*.

Based on the results of the Site Characterization presented in the original *Deferral Request* and subsequent *Deferral Request Addendum*, approved by NMOCD on March 31, 2020, the following NMOCD Table I Closure Criteria (Closure Criteria) apply:

- Benzene: 10 mg/kg
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg
- Total petroleum hydrocarbons (TPH): 100 mg/kg
- Chloride: naturally occuring chloride present at ranges from <9.88 mg/kg to 4,330 mg/kg

EXCAVATION ACTIVITIES

Between December 14, 2022, and March 2, 2023, Ensolum personnel oversaw excavation activities in the vicinity of sidewall soil samples SW05 and SW12, which contained residually elevated TPH concentrations. Excavation activities were performed by use of heavy equipment and directed by field screening soil for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. Photographic documentation of excavation activities is included in Appendix B.

Following removal of soil, Ensolum personnel collected 5-point composite soil samples representing up to 200 square feet from the floor and/or sidewall of the excavation. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing.

The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported under strict chain-of-custody procedures to Eurofins Laboratories (Eurofins) in Carlsbad, New Mexico, for analysis of the following chemicals of concern (COC): BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH- GRO, TPH- DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0.

Soil removal in the vicinity of composite sidewall soil sample SW05 was expanded and following field screening results, two sidewall soil samples (SW17 and SW18) were collected at depths from the ground surface to 5 feet below ground surface (bgs). Sidewall samples were not collected along the northern and eastern sides since those areas are adjacent to previously excavated areas with non-waste containing backfilled soil present. Confirmation floor soil samples FS34 through FS36 were collected on the floor of the excavation at a depth of 5 feet bgs. Laboratory analytical results for sidewall soil sample SW17 indicated all COC concentrations were compliant with the reclamation requirement and within

range of naturally occurring chloride concentrations. Laboratory analytical results for sidewall soil sample SW18 indicated TPH exceeded the reclamation requirement, which resulted in additional expansion of the sidewall. Sidewall sample SW20 continued to exceed the reclamation requirement for TPH and the sidewall was expanded again. The final sidewall sample, SW21, was in compliance with the reclamation requirement and naturally occurring chloride ranges. Laboratory analytical results for floor soil samples FS34 through FS36 indicated all COC concentrations were compliant with the strictest Table 1 Closure Criteria.

Soil removal in the vicinity of composite sidewall soil sample SW12 was expanded and following field screening results, sidewall soil sample SW16 was collected at depths ranging from the ground surface to 2.5 feet bgs. Laboratory analytical results for sidewall soil sample SW16 indicated the concentration of TPH exceeded the reclamation requirement. As such, additional waste-containing soil was excavated and the sidewall was resampled, SW19, which also exceeded the reclamation requirement for TPH. The sidewall was expanded further, resulting in the collection of sidewall soil sample SW22. Laboratory analytical results indicated TPH in sidewall soil sample SW22 was compliant with the reclamation requirement, and chloride was compliant with the previously approved naturally occurring chloride ranges. Floor soil samples, FS32 and FS33, were also collected at a depth of 2.5 feet bgs. Laboratory analytical results indicated the TPH concentration in floor soil sample FS33 exceeded the reclamation requirement. As a result, additional floor soil was excavated deeper to a final depth of 3.5 feet bgs and floor soil sample FS33A was collected. Laboratory analytical results for floor soil samples FS32 and FS33A indicated all COC concentration were compliant with the reclamation requirement for TPH and within naturally occurring chloride ranges.

The excavation extents and excavation soil sample locations are presented on Figure 2. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Appendix C.

The final excavation extents measured, in total, approximately 986 square feet. A total of approximately 153 cubic yards of impacted soil was removed during the excavation activities. The impacted soil was transported and properly disposed of at the R360 Landfill Disposal Facility in Hobbs, New Mexico. After completion of confirmation sampling, the excavation areas were secured with fencing.

CLOSURE REQUEST

Excavation activities were completed at the Site to remediate residual impacted soil in the vicinity of the wellhead following plugging and abandonment of the well. Based on laboratory analytical results for excavation floor and sidewall soil samples in the vicinity of formerly failing sidewall soil samples SW05 and SW12, all impacted soil that was previously approved for deferral has been adequately removed and remaining soil meets the reclamation requirement for TPH and is within range of established naturally occurring chloride concentrations. The Site is in the process of being reclaimed and the open excavation will be backfilled with locally sourced material, contoured to matched existing topography, and seeded with a BLM-approved seed mixture along with the entire well pad.

XTO believes these remedial actions are protective of human health, the environment, and groundwater. Based on the totality of response and remediation efforts, XTO respectfully requests closure for Incident Number NAB1919955454.

If you have any questions or comments, please contact Ms. Tacoma Morrissey at (337) 257-8307 or tmorrissey@ensolum.com.

Sincerely,
Ensolum, LLC

Daniel R. Moir, PG
Senior Managing Geologist

Ashley L. Ager, M.S., PG
Principal

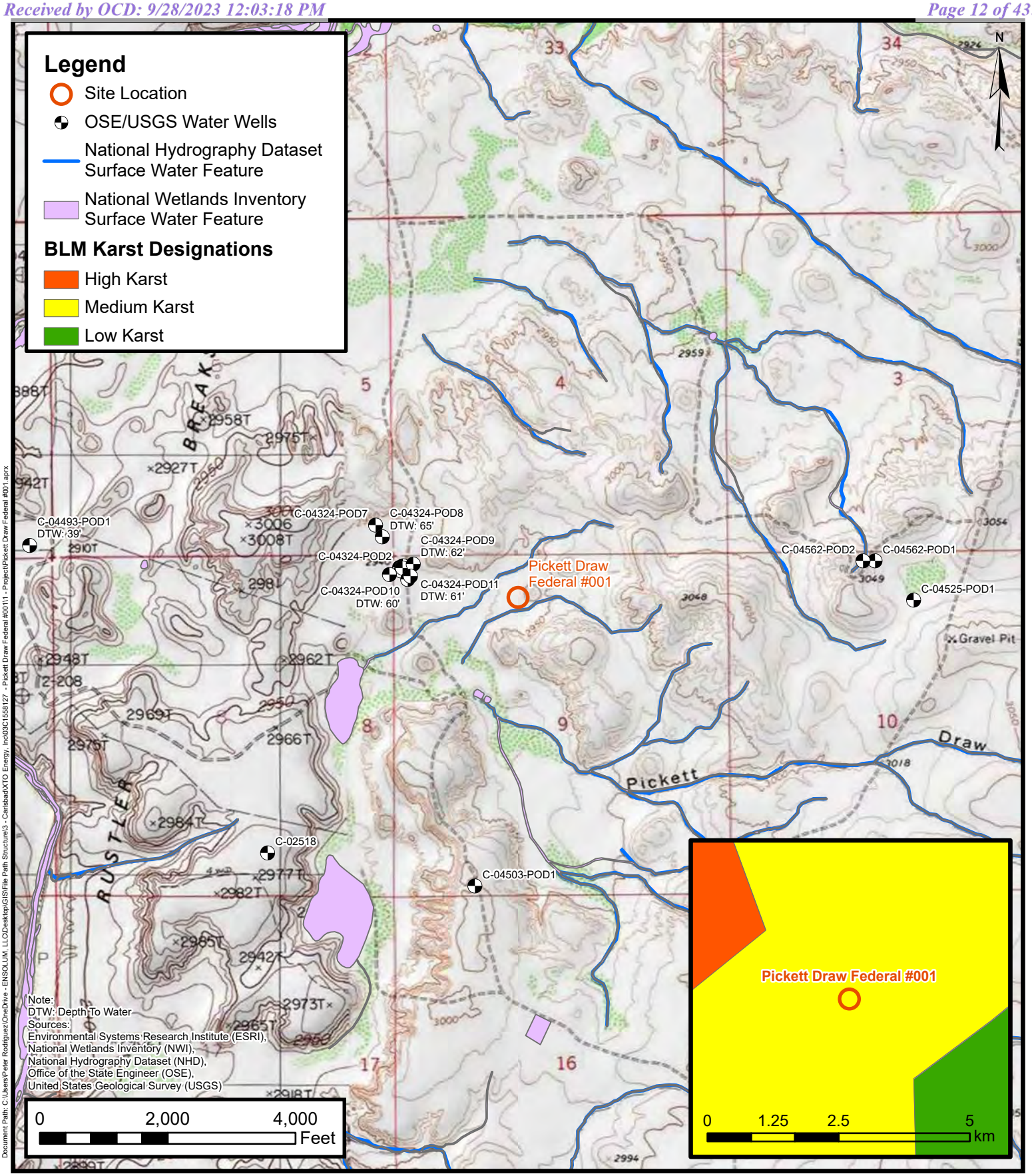
cc: Garrett Green, XTO
Shelby Pennington, XTO
BLM

Appendices:

Figure 1	Site Receptor Map
Figure 3	Excavation Soil Sample Locations
Table 1	Soil Sample Analytical Results
Appendix A	Deferral Request Addendum, dated December 3, 2019
Appendix B	Photographic Log
Appendix C	Laboratory Analytical Reports & Chain-of-Custody Documentation
Appendix D	NMOCD Correspondences

ENSOLUM

FIGURES



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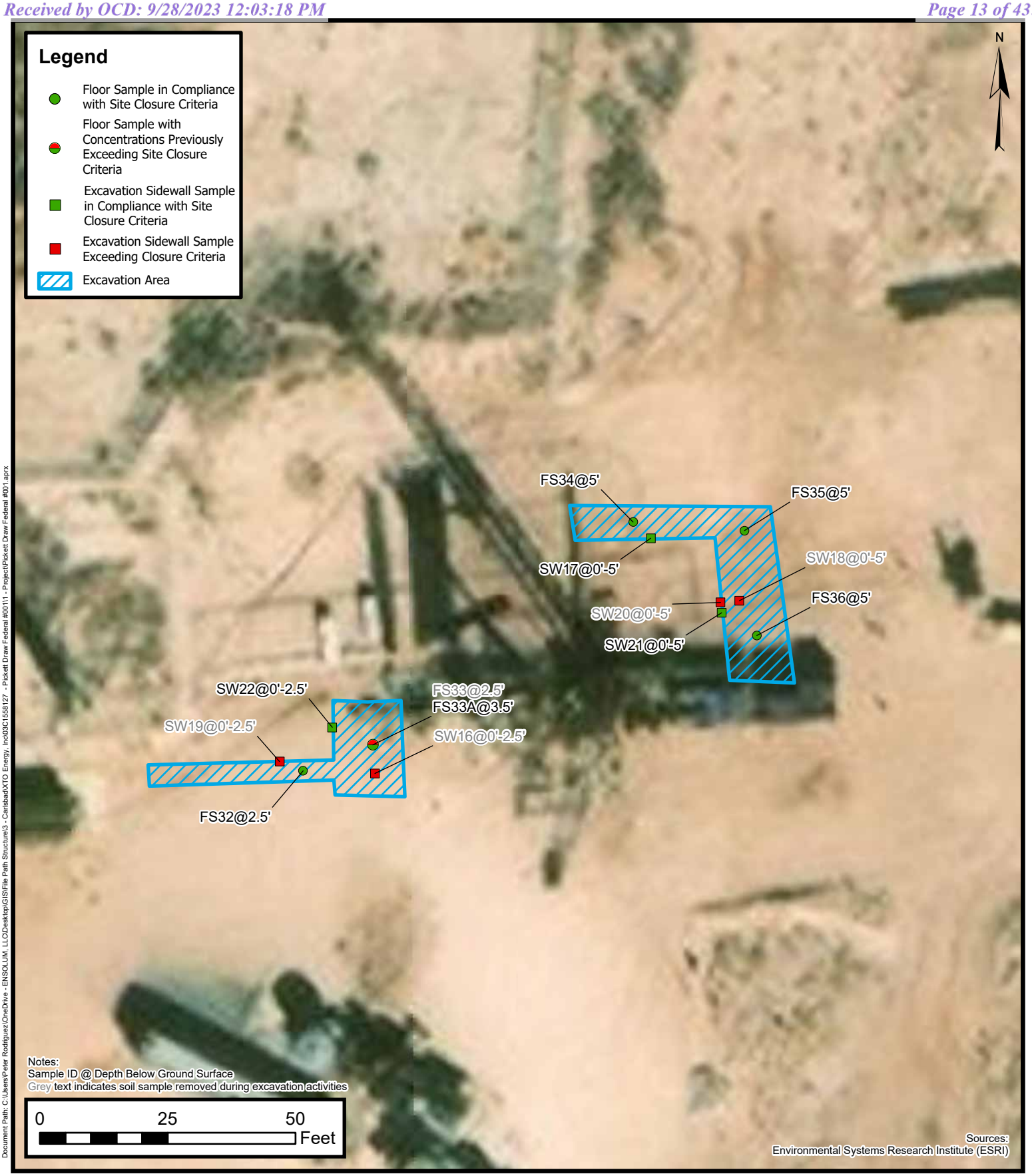
Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

XTO Energy, Inc.
Pickett Draw Federal #001
Unit C, Section 9, T25S, R29E
Eddy County, New Mexico

FIGURE
1



Document Path: C:\Users\Peter Rodriguez\OneDrive - ENSOLUM, LLC\Desktop\GIS\File Path Structure\3 - Carlsbad\XTO Energy, Inc\03C1558127 - Pickett Draw Federal #001\1 - Project\Pickett Draw Federal #001.aprx

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Excavation Soil Sample Locations

XTO Energy, Inc.
Pickett Draw Federal #001
Unit C, Section 9, T25S, R29E
Eddy County, New Mexico

FIGURE
2

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TABLE

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Picket Draw Federal #001
XTO Energy, Inc
Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	See Below
Naturally Occuring Chloride Range										<9.88 to 4,330
Confirmation Soil Samples - Deferral Area SW05										
SW17	12/14/2022	0 - 5	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	231
~~SW18~~	~~12/14/2022~~	~~0 - 5~~	~~<0.00199~~	~~<0.00398~~	~~<49.9~~	~~473~~	~~<49.9~~	~~473~~	~~473~~	~~26.3~~
~~SW20~~	~~12/29/2022~~	~~0 - 5~~	~~<0.00200~~	~~<0.00399~~	~~<50.0~~	~~504~~	~~350~~	~~504~~	~~854~~	~~233~~
SW21	01/17/2023	0 - 5	<0.00200	<0.00399	<50.0	75.2	<50.0	75.2	75.2	472
FS34	08/23/2023	5	<0.00200	<0.00400	<49.5	<49.5	<49.5	<49.5	<49.5	64.6
FS35	08/23/2023	5	<0.00200	<0.00399	<50.4	<50.4	<50.4	<50.4	<50.4	77.0
FS36	08/23/2023	5	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	79.2
Confirmation Soil Samples - Deferral Area SW12										
~~SW16~~	~~12/14/2022~~	~~0 - 2.5~~	~~<0.00201~~	~~<0.00402~~	~~<50.0~~	~~817~~	~~574~~	~~817~~	~~1,390~~	~~537~~
~~SW19~~	~~12/29/2022~~	~~0 - 2.5~~	~~<0.00202~~	~~<0.00403~~	~~<49.9~~	~~906~~	~~147~~	~~906~~	~~1,050~~	~~1,450~~
SW22	01/17/2023	0 - 2.5	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	3,000
FS32	12/29/2022	2.5	<0.00198	<0.00396	<50.0	<50.0	<50.0	<50.0	<50.0	1,620
~~FS33~~	~~01/17/2023~~	~~2.5~~	~~<0.00200~~	~~<0.00401~~	~~<49.9~~	~~1,450~~	~~<49.9~~	~~1,450~~	~~1,450~~	~~1,390~~
FS33A	03/02/2023	3.5	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	412

Notes:

bgs: below ground surface
mg/kg: milligrams per kilogram
NMOCD: New Mexico Oil Conservation Division
BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes
Concentrations in **bold** exceed the NMOCD Table I Closure Criteria or reclamation requirement where applicable.

GRO: Gasoline Range Organics
DRO: Diesel Range Organics
ORO: Oil Range Organics
TPH: Total Petroleum Hydrocarbon
NMAC: New Mexico Administrative Code
~~Grey~~ text indicates soil sample removed during excavation activities

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APPENDIX A

Deferral Request Addendum, dated December 3, 2019

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
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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	NAB1919955454
District RP	2RP-5537
Facility ID	
Application ID	pAB1919955186

Release Notification

Responsible Party

Responsible Party XTO Energy	OGRID 5380
Contact Name Kyle Littrell	Contact Telephone 432-221-7331
Contact email Kyle_Littrell@xtoenergy.com	Incident # *(assigned by OCD)* NAB1919955454
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.150097° Longitude -103.991664°
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Pickett Draw Federal #001	Site Type Production Well Facility
Date Release Discovered 6/21/2019	API# *(if applicable)* 30-015-25767

Unit Letter	Section	Township	Range	County
C	9	25S	29E	Eddy

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

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) 5.96	Volume Recovered (bbls) 5
☒ Produced Water	Volume Released (bbls) 589.58	Volume Recovered (bbls) 495
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

Flowline failed due to pressure communication with the Pickett Draw Federal #1 from hydraulic frac operations for the Corral Canyon Federal Com 6H well. Fluids were released to the well pad and pasture to the NW (approx 60 ft) and misting to the NE (approx 180 ft). Vacuum trucks recovered free fluids. Additional third party resources have been retained to assist with remediation.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NAB1919955454
District RP	2RP-5537
Facility ID	
Application ID	pAB1919955186

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? An unauthorized release of a volume of 25 barrels or more

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?
Notice provided by Bryan Foust to Mike Bratcher, Rob Hamlet, Victoria Venegas, and Jim Griswold (NMOCD), and Jim Amos and Deborah McKinney (BLM), on 6/22/2019 by email

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:
N/A

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: Amy C. Ruth
Title: SH&E Coordinator
Signature:
Date: 7/2/2019
email: Amy_Ruth@xtoenergy.com
Telephone: 575-689-3380

OCD Only

Received by: Amalia Bustamante
Date: 7/18/2019

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	2RP-5537
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?	51-100 (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.

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	2RP-5537
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: Kyle Littrell Title: SH&E Supervisor

Signature: Date:

email: Kyle_Littrell@xtoenergy.com Telephone: (432)-221-7331

OCD Only

Received by: Date:

Form C-141
Page 5

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	2RP-5537
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: Kyle Littrell Title: SH&E Supervisor

Signature: Date:

email: Kyle_Littrell@xtoenergy.com Telephone: (432)-221-7331

OCD Only

Received by: Date:

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

Signature: Date:

LT Environmental, Inc.
3300 North "A" Street
Building 1, Unit 222
Midland, Texas 79705
432.704.5178

December 3, 2019

Mr. Mike Bratcher
New Mexico Oil Conservation Division
811 South First Street
Artesia, New Mexico 88210

RE: Deferral Request Addendum
Pickett Draw Federal #001
Remediation Permit Number 2RP-5537
Eddy County, New Mexico

Dear Mr. Bratcher:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following addendum to an original Deferral Request dated September 19, 2019. This addendum provides an update of remediation activities at the Pickett Draw Federal #001 (Site) located in Unit C, Section 9, Township 25 South, Range 29 East, in Eddy County, New Mexico (Figure 1) in response to the denial of the previous Deferral Request by the New Mexico Oil Conservation Division (NMOCD). In the denial, NMOCD suggested XTO advance three additional potholes to further investigate the concentration of chloride in background lithology at the Site. Based on additional work conducted, including new potholes and soil samples, XTO is requesting NMOCD reconsider deferral of the remaining impacted soil until major facility and/or site reconstruction.

BACKGROUND

On September 19, 2019, LTE submitted a Deferral Request to the NMOCD for impacted soil from a June 21, 2019 crude oil and produced water release associated with a failed flowline at the Site. The Remediation Permit (RP) Number is 2RP-5537 and XTO excavated the majority of the impacted soil, an estimated 2,000 cubic yards, within the release area. LTE personnel collected preliminary, delineation, and excavation soil samples within and around the release extent during July and August 2019, to assess the lateral and vertical extent of impacts to soil. The preliminary, delineation, and excavation soil samples are depicted on Figure 2, Figure 3, and Figure 4, respectively. Deferral was requested due to residual impacted soil left in place in the areas of buried former pits and associated protective liners and for compliance with XTO's safety policy regarding earth-moving activities within 10 feet of an active well head and within 2 feet of an active pipeline.

On October 28, 2019, the NMOCD denied deferral, via email, and suggested additional background sampling:

> *"The OCD would prefer to see 3 background potholes away from the 4 pads, possibly 50-100 feet south of the road… Average the chlorides on the 3 potholes and use that as your naturally occurring chloride concentrations."*

ADDITIONAL SITE ACTIVITIES

On November 8, 2019, LTE conducted additional delineation activities to better characterize naturally occurring chloride concentrations as requested by the NMOCD. Delineation potholes PH16 through PH18 were advanced to a depth of 20 feet bgs and were located an average of 210 feet south of the road. Thirteen delineation soil samples were collected from each pothole. Soil from the potholes was field screened for volatile aromatic hydrocarbons and chloride utilizing a PID and Hach© chloride QuanTab© test strips, respectively. Field screening results and observations for each pothole were logged on lithologic/soil sampling logs, which are included in Attachment 2.

The soil samples were then placed directly into pre-cleaned glass jars, labeled with location, date, time, sampler, method of analysis, and immediately placed on ice. The soil samples were shipped at 4 degrees Celsius (°C) under strict chain-of-custody procedures to Xenco Laboratories (Xenco) in Midland, Texas, for analysis of chloride by USEPA Method 300. The potholes were backfilled with the soil removed. The potholes and soil sample locations are depicted on Figure 4. Photographic documentation was conducted during the soil sampling activities. Photographs are included in Attachment 3.

SOIL ANALYTICAL RESULTS

Laboratory analytical results for background soil samples collected from potholes PH16 through PH18, collected at depths ranging from 0.5 foot to 20 feet bgs, indicated naturally occurring chloride concentrations of <9.88 milligrams per kilogram (mg/kg) to 1,550 mg/kg. The range of all background chloride concentrations from PH12 through PH18 is <9.88 mg/kg to 4,330 mg/kg. The average of all background chloride concentrations is 974 mg/kg. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Attachment 4.
Comparing the background analytical results to previously collected delineation and excavation confirmation samples, the following samples exceed the average concentration:

- Delineation samples collected from potholes PH06 and PH10;
- Excavation floor samples FS18 through FS25; and
- Excavation sidewall samples SW12 and SW14.

Soil in areas represented by PH06 and PH10 were excavated and confirmation samples collected near PH06 were compliant with Closure Criteria. Excavation confirmation samples collected in the area represented by PH10 exceeded the average background value of 974 mg/kg, but were below the highest background concentration detected of 4,330 mg/kg. Chloride concentrations in floor samples FS18 through FS25 ranged from 633 mg/kg in FS18 to 3,820 mg/kg in FS22. Floor samples FS20, FS21, and FS24 also exceeded the Closure Criteria for volatile organic compounds.

Excavation sidewall samples SW12 and SW14 are in the southern-most excavation and contain 1,760 mg/kg and 1,450 mg/kg chloride, respectively. Sample SW12 also exceeds Closure Criteria for TPH.

DEFERRAL REQUEST

As argued in the original Deferral Request, due to the risk of compromising buried pits and for compliance with the XTO safety policy regarding earth moving activities within 10 feet of active wellheads and 2 feet of active pipelines, excavation was completed to the maximum extent feasible. A total of approximately 2,000 cubic yards were excavated from the Site; however, residual impacted soil was left in-place in areas that cannot be excavated.

Laboratory analytical results for excavation floor samples collected at depths of 4 feet bgs to 6 feet bgs indicated that TPH concentrations ranging from 146 mg/kg to 2,070 mg/kg were left in place. Further excavation cannot be completed due to the presence of buried lined reserve pits. Excavation would risk encountering the pits and compromising the integrity of the pits and protective liners. Impacted soil near the active wellhead and pipeline was also left in place. The impacted soil left in place is fully delineated vertically is delineated vertically by delineation soil samples PH02A, PH03A, PH04A, PH10A and laterally by excavation sidewall samples SW01 through SW04, SW06 through SW11, and SW13 through SW15.

An estimated 200 cubic yards of soil impacted by the release remain in place bounded by sidewall samples SW05, SW12, and SW14, assuming a maximum 5-foot depth based on samples FS22, FS23, FS31, PH07A, PH08A, PH09A, and PH11A collected at depths of 2.5 feet to 5 feet bgs that were compliant with the TPH closure criteria. The TPH concentrations in the floor samples are below the 2,500 mg/kg Closure Criteria that would be applicable based on depth to groundwater. The 100 mg/kg TPH Closure Criteria is being applied based on the proximity of an intermittent stream/dry wash. The floor samples with TPH concentrations greater than 100 mg/kg that were left in place were collected from depths deeper than the intermittent and losing stream/dry wash and the intermittent surface water present in the wash will not be affected by impacted soil left in place at depth and buried with new caliche. Natural attenuation will occur through biodegradation of residual TPH concentrations. Based on the current and future planned use of the area, the presence of buried pits, depth to groundwater at the Site, and closure of the potential pathway for residual TPH concentrations to impact surface water (through removal of

impacted shallow soil), natural attenuation of residual TPH in subsurface soil appears to be an effective remedial approach to protecting human health and the environment.

Similarly, all chloride concentrations in the floor, sidewall, and delineation samples are below the 10,000 mg/kg closure criteria that would be applicable based on depth to groundwater. In the majority of the excavation, soil containing elevated chloride in the top four feet of the subsurface has been removed. The chloride concentrations in the all confirmation samples are within the range of the naturally occurring chlorides detected in the area. Near the center of the impacted area, the floor of the excavation, which ranges from 4 to 5 feet bgs, contains chloride concentrations exceeding the average of all background samples collected, but less than the highest background chloride concentration detected. The soil is underlain by buried former pits and associated protective liners, which would prevent potential future vertical migration.

Sidewall samples in the southern excavation contain chloride concentrations exceeding the average of background concentrations, but below the highest detected background concentration. Soil in this area has been removed from the top 2.5 feet of the subsurface, but the sidewalls are too near the active wellhead to remove additional soil. The floor sample in this excavation contains chloride below the average of the background chloride concentrations.

XTO requests to backfill the existing excavations and complete remediation during any future major construction/alteration or final plugging and abandonment, whichever occurs first. LTE and XTO do not believe deferment will result in imminent risk to human health, the environment, or groundwater. No saturated soil remains in place. Any residual impact meets closure standards established to be protective of groundwater. All impacts have been removed from the top 4 feet of the subsurface, except in the southern excavation, which is adjacent to the wellhead and cannot be safely removed. The remaining hydrocarbon and chloride impacts in the center of the release area are underlain by buried reserve pits, which will impede future vertical migration. XTO requests deferral of final remediation for RP Number 2RP-5537. Upon approval of this deferral request, XTO will backfill the excavation with material purchased locally and recontour the Site to match pre-existing site conditions. An updated NMOCD Form C-141 is included as Attachment 1 and a Photographic Log is included as Attachment 3.

If you have any questions or comments, please do not hesitate to contact Ms. Ashley Ager at (970) 385-1096 or aager@ltenv.com.

Sincerely,

LT ENVIRONMENTAL, INC.

Carol Ann Whaley
Staff Geologist

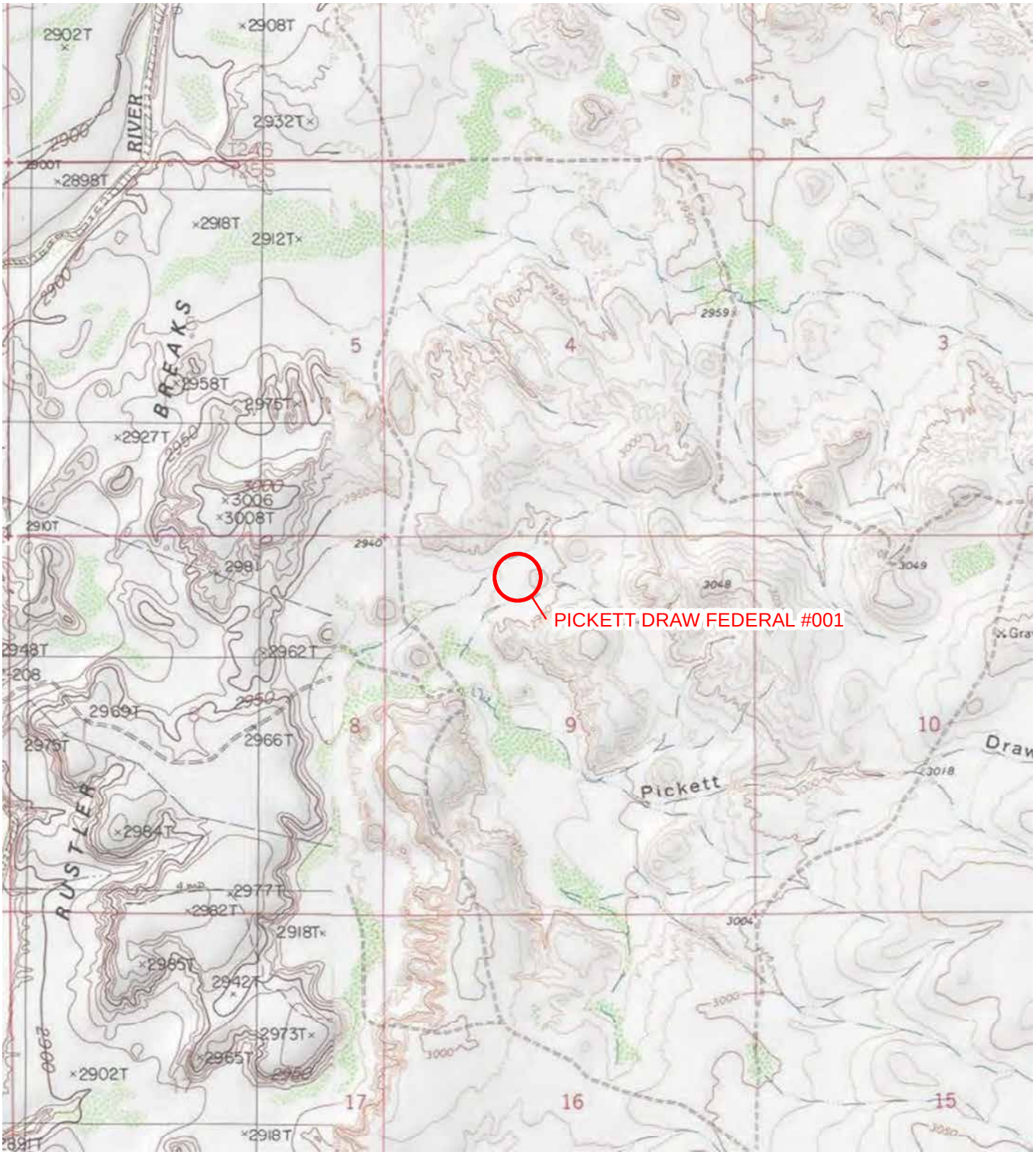
Ashley L. Ager, M.S., P.G.
Senior Geologist

cc: Kyle Littrell, XTO
Victoria Venegas, NMOCD
Robert Hamlet, NMOCD
United States Bureau of Land Management – New Mexico

Attachments:

Figure 1	Site Location Map
Figure 2	Preliminary Soil Sample Locations
Figure 3	Excavation Soil Sample Locations
Figure 4	Delineation Soil Sample Locations
Table 1	Laboratory Analytical Results
Attachment 1	Initial/Final NMOCD Form C-141 (2RP-5537)
Attachment 2	Lithologic / Soil Sample Logs
Attachment 3	Photographic Log
Attachment 4	Laboratory Analytical Reports

FIGURES



LEGEND

SITE LOCATION

IMAGE COURTESY OF ESRI/USGS

0 2,000 4,000
Feet

N

FIGURE 1
SITE LOCATION MAP
PICKETT DRAW FEDERAL #001
UNIT C SEC 9 T25S R29E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

NOTE: REMEDIATION PERMIT NUMBERS 2RP-5537

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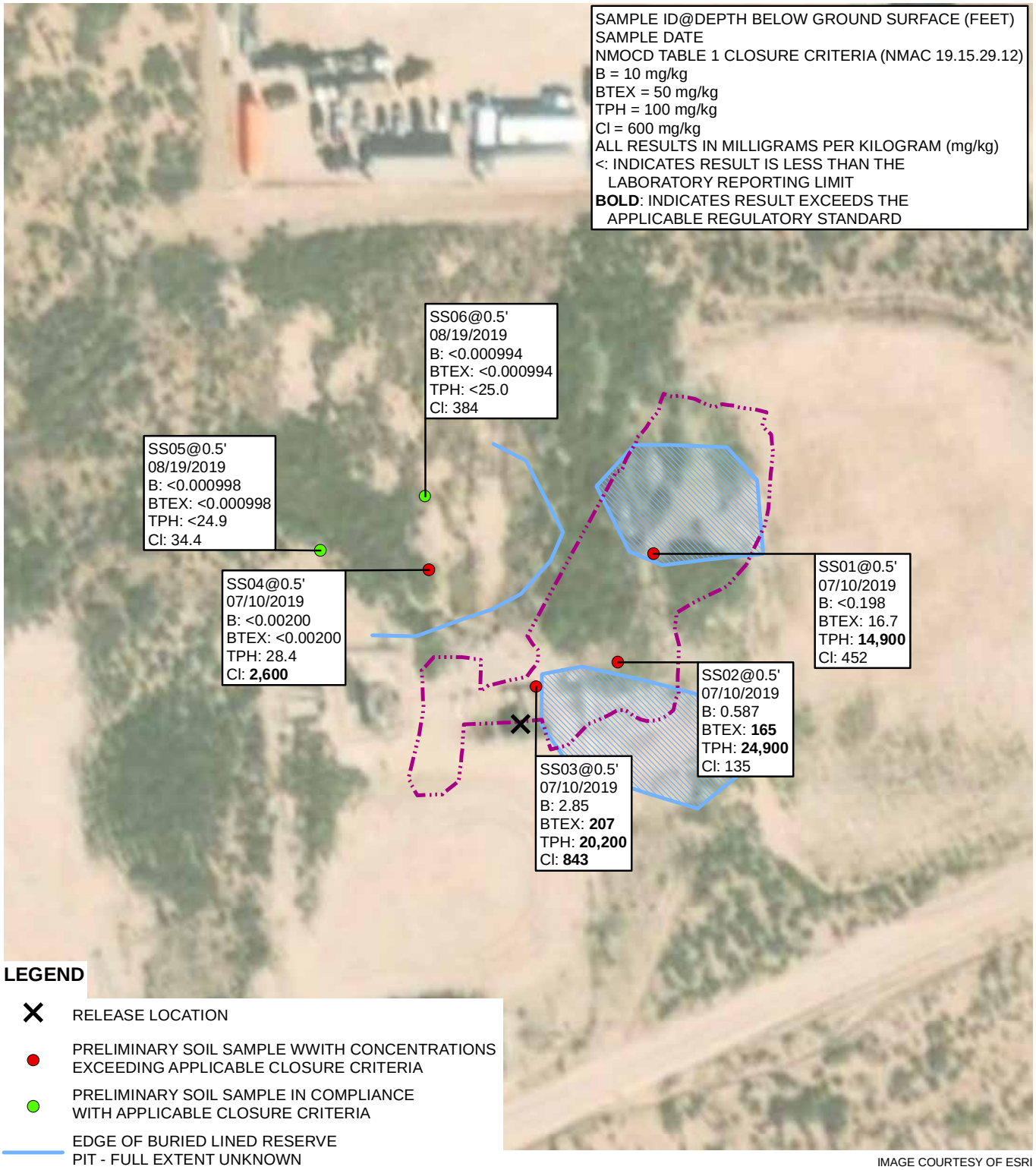


LEGEND

- ✕ RELEASE LOCATION
- PRELIMINARY SOIL SAMPLE WWITH CONCENTRATIONS EXCEEDING APPLICABLE CLOSURE CRITERIA
- PRELIMINARY SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- EDGE OF BURIED LINED RESERVE PIT - FULL EXTENT UNKNOWN
- RELEASE EXTENT
- ESTIMATED LOCATION OF BURIED LINED RESERVE PIT

B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
TPH: TOTAL PETROLEUM HYDROCARBONS
Cl: CHLORIDE
NMAC: NEW MEXICO ADMINISTRATIVE CODE
NMOCD: NEW MEXICO OIL CONSERVATION DIVISION
NOTE: REMEDIATION PERMIT NUMBER 2RP-5537

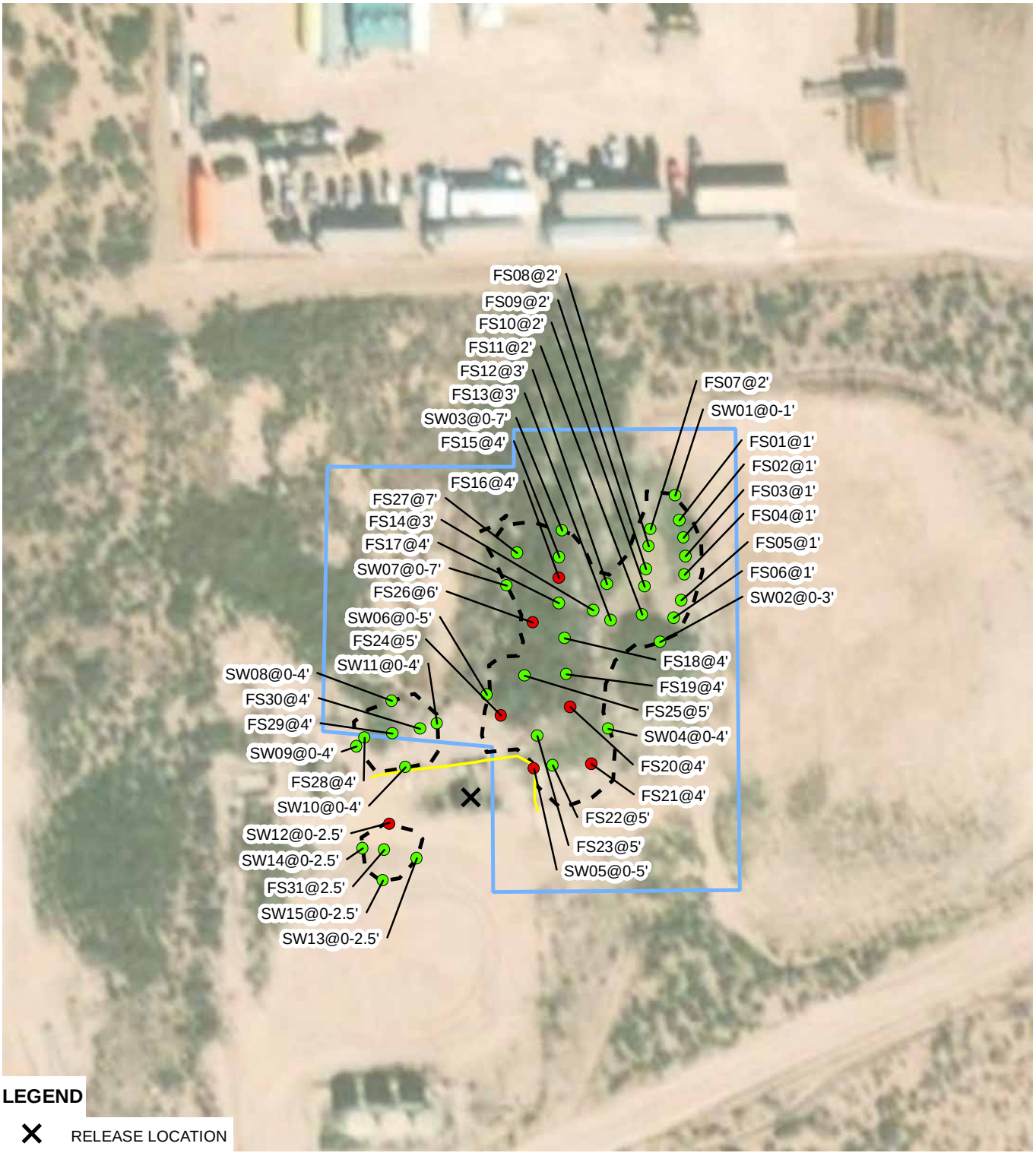
IMAGE COURTESY OF ESRI

0 80 160
Feet

N

FIGURE 2
PRELIMINARY SOIL SAMPLE LOCATIONS
PICKETT DRAW FEDERAL #001
UNIT C SEC 9 T25S R29E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012919150_PICKETT DRAW FEDERAL #001\012919150_FIG02_PRELIMINARY_5537_1.mxd



LEGEND

- ✕ RELEASE LOCATION
- EXCAVATION SOIL SAMPLE WITH CONCENTRATIONS EXCEEDING APPLICABLE CLOSURE CRITERIA
- EXCAVATION SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- GAS LINE
- EXCAVATION EXTENT
- APPROXIMATE LOCATION OF MULTIPLE FORMER BURIED PITS

SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)
NOTE: REMEDIATION PERMIT NUMBER 2RP-5537

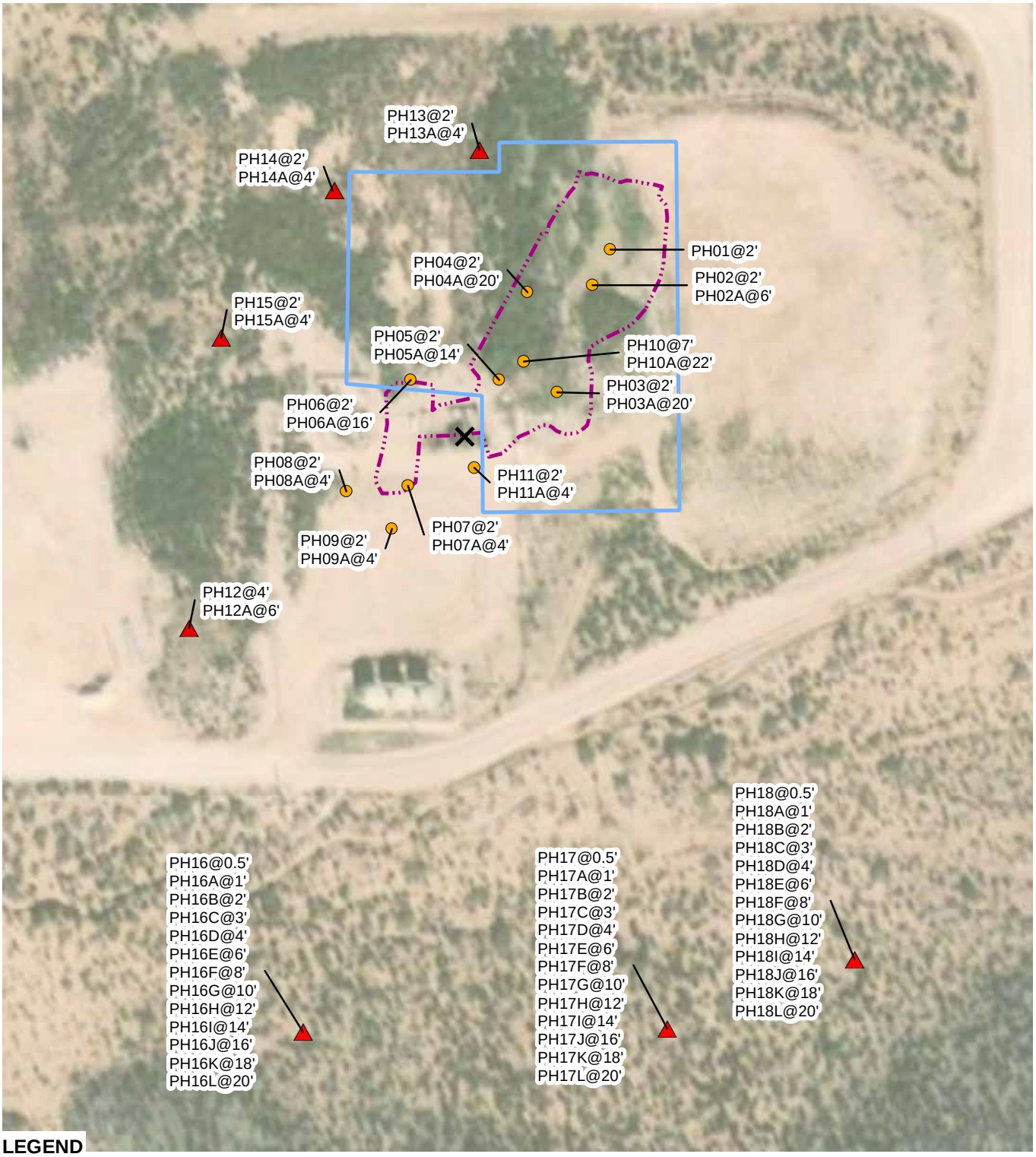
IMAGE COURTESY OF ESRI

0 80 160
Feet

N

FIGURE 3
EXCAVATION SOIL SAMPLE LOCATIONS
PICKETT DRAW FEDERAL #001
UNIT C SEC 9 T25S R29E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012919150_PICKETT DRAW FEDERAL #001\012919150_FIG03_EXCAVATION_5537.mxd



LEGEND

- ✕ RELEASE LOCATION
- DELINEATION SOIL SAMPLE
- BACKGROUND SOIL SAMPLE
- RELEASE EXTENT
- APPROXIMATE LOCATION OF MULTIPLE FORMER BURIED PITS

SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)
NOTE: REMEDIATION PERMIT NUMBER 2RP-5537

IMAGE COURTESY OF ESRI

0 100 200
Feet

N

FIGURE 4
DELINEATION SOIL SAMPLE LOCATIONS
PICKETT DRAW FEDERAL #001
UNIT C SEC 9 T25S R29E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012919150_PICKETT DRAW FEDERAL #001\012919150_FIG04_DELINEATION_5537.mxd

TABLE

TABLE 1
SOIL ANALYTICAL RESULTS

PICKETT DRAW FEDERAL #001
REMEDIATION PERMIT NUMBER 2RP-5537
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
SS01	0.5	07/10/2019	<0.198	1.50	1.39	13.8	16.7	1,420	12,800	640	14,200	**14,900**	452
SS02	0.5	07/10/2019	0.587	18.8	15.1	131	**165**	4,120	20,000	823	24,100	**24,900**	135
SS03	0.5	07/10/2019	2.85	50.2	16.7	137	**207**	5,590	14,000	654	19,600	**20,200**	843
SS04	0.5	07/10/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	28.4	<15.0	28.4	28.4	2,600
SS05	0.5	08/19/2019	<0.000998	<0.000998	<0.000998	<0.000998	<0.000998	<24.9	<24.9	<24.9	<24.9	<24.9	34.4
SS06	0.5	08/19/2019	<0.000994	<0.000994	<0.000994	<0.000994	<0.000994	<25.0	<25.0	<25.0	<25.0	<25.0	384
PH01	2	08/02/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	875
PH02	2	08/02/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	27.6	<15.0	27.6	27.6	140
PH02A	6	08/02/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	15.0
PH03	2	08/02/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	144	19.3	144	**163**	1,550
PH03A	20	08/02/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	42.4	<15.0	42.4	42.4	16.4
PH04	2	08/02/2019	0.00626	0.228	0.280	4.05	4.56	526	2,630	283	3,160	**3,440**	511
PH04A	20	08/05/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	1,750
PH05	2	08/05/2019	0.0863	7.10	5.01	15.4	27.6	2,150	4,720	338	6,870	**7,210**	123
PH05A	14	08/05/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	16.7	340	39.5	357	**396**	813
PH06	2	08/05/2019	<0.00199	0.00372	0.00447	0.0154	0.0236	<15.0	<15.0	<15.0	<15.0	<15.0	420
PH06A	16	08/05/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	**5,430**
PH07	2	08/05/2019	<0.00200	0.00315	0.00266	0.0124	0.0182	<15.0	323	53.6	323	**377**	842
PH07A	4	08/05/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	508
PH08	2	08/05/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<14.9	<14.9	<14.9	<14.9	<14.9	24.4
PH08A	4	08/05/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	56.7
PH09	2	08/05/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	145
PH09A	4	08/05/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	311
PH10	7	08/15/2019	<0.000996	<0.000996	<0.000996	<0.000996	<0.000996	<24.9	<24.9	<24.9	<24.9	<24.9	1,380
PH10A	22	08/15/2019	<0.000996	<0.000996	<0.000996	<0.000996	<0.000996	<24.9	<24.9	<24.9	<24.9	<24.9	4,240
PH11	2	08/19/2019	<0.000998	<0.000998	<0.000998	<0.000998	<0.000998	<24.9	<24.9	<24.9	<24.9	<24.9	355
NMOCD Table 1 Closure Criteria			**10**	NE	NE	NE	**50**	NE	NE	NE	NE	**100**	**600**
									Background Chloride Conentration Range (mg/kg)				**<9.88-4,330**

TABLE 1
SOIL ANALYTICAL RESULTS

PICKETT DRAW FEDERAL #001
REMEDIATION PERMIT NUMBER 2RP-5537
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
PH11A	4	08/19/2019	<0.000996	<0.000996	<0.000996	<0.000996	<0.000996	<24.9	<24.9	<24.9	<24.9	<24.9	265
FS01	1	08/15/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<25.2	<25.2	<25.2	<25.2	<25.2	969
FS02	1	08/15/2019	<0.000990	<0.000990	<0.000990	<0.000990	<0.000990	<25.1	<25.1	<25.1	<25.1	<25.1	142
FS03	1	08/15/2019	<0.000990	<0.000990	<0.000990	<0.000990	<0.000990	<25.1	<25.1	<25.1	<25.1	<25.1	256
FS04	1	08/15/2019	<0.000994	<0.000994	<0.000994	<0.000994	<0.000994	<24.9	<24.9	<24.9	<24.9	<24.9	176
FS05	1	08/15/2019	<0.000996	<0.000996	<0.000996	<0.000996	<0.000996	<24.9	29.2	<24.9	29.2	29.2	196
FS06	1	08/15/2019	<0.000994	<0.000994	<0.000994	<0.000994	<0.000994	<25.0	<25.0	<25.0	<25.0	<25.0	51.8
FS07	2	08/15/2019	<0.000998	<0.000998	<0.000998	<0.000998	<0.000998	<24.9	<24.9	<24.9	<24.9	<24.9	195
FS08	2	08/15/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<25.1	83.7	<25.1	83.7	83.7	189
FS09	2	08/15/2019	<0.000998	<0.000998	<0.000998	<0.000998	<0.000998	<25.1	27.7	<25.1	27.7	27.7	237
FS10	2	08/15/2019	<0.00101	<0.00101	0.00224	<0.00101	0.00224	<25.1	<25.1	<25.1	<25.1	<25.1	74.0
FS11	2	08/15/2019	<0.000994	<0.000994	<0.000994	<0.000994	<0.000994	<24.9	<24.9	<24.9	<24.9	<24.9	350
FS12	3	08/15/2019	<0.000990	<0.000990	<0.000990	<0.000990	<0.000990	<24.9	<24.9	<24.9	<24.9	<24.9	274
FS13	3	08/15/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<25.1	<25.1	<25.1	<25.1	<25.1	319
FS14	3	08/15/2019	<0.000996	<0.000996	<0.000996	<0.000996	<0.000996	<25.0	<25.0	<25.0	<25.0	<25.0	38.2
FS15	4	08/15/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<25.1	152	<25.1	152	152	183
FS16	4	08/15/2019	<0.000994	<0.000994	0.00243	0.0359	0.0383	<25.0	586	<25.0	586	**586**	161
FS17	4	08/15/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<24.9	57.6	<24.9	57.6	57.6	187
FS18	4	08/15/2019	<0.000998	<0.000998	<0.000998	<0.000998	<0.000998	<24.9	59.0	<24.9	59.0	59.0	633
FS19	4	08/15/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<25.1	42.2	<25.1	42.2	42.2	1,150
FS20	4	08/15/2019	<0.00100	<0.00100	0.00148	0.0183	0.0198	<25.1	190	<25.1	190	**190**	1,410
FS21	4	08/15/2019	<0.000996	<0.000996	0.00117	0.0111	0.0123	901	1,170	<25.0	2,070	**2,070**	767
FS22	5	08/19/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<25.0	<25.0	<25.0	<25.0	<25.0	3,820
FS23	5	08/19/2019	<0.000994	<0.000994	<0.000994	<0.000994	<0.000994	<25.0	<25.0	<25.0	<25.0	<25.0	1,450
FS24	5	08/19/2019	<0.00100	<0.00100	0.00341	0.0443	0.0477	<25.0	319	<25.0	319	**319**	2,240
FS25	5	08/19/2019	<0.000992	<0.000992	<0.000992	<0.000992	<0.000992	<25.0	<25.0	<25.0	<25.0	<25.0	1,050
NMOCD Table 1 Closure Criteria			**10**	NE	NE	NE	**50**	NE	NE	NE	NE	**100**	**600**
									Background Chloride Conentration Range (mg/kg)				**<9.88-4,330**

TABLE 1
SOIL ANALYTICAL RESULTS

PICKETT DRAW FEDERAL #001
REMEDIATION PERMIT NUMBER 2RP-5537
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
FS26	6	08/19/2019	<0.000990	<0.000990	<0.000990	<0.000990	<0.000990	<24.9	146	<24.9	146	**146**	127
FS27	7	08/19/2019	<0.000996	<0.000996	<0.000996	<0.000996	<0.000996	<24.9	<24.9	<24.9	<24.9	<24.9	66.5
FS28	4	08/19/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<25.0	<25.0	<25.0	<25.0	<25.0	894
FS29	4	08/19/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<24.9	<24.9	<24.9	<24.9	<24.9	812
FS30	4	08/19/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<25.1	<25.1	<25.1	<25.1	<25.1	854
FS31	2.5	08/19/2019	<0.000994	<0.000994	<0.000994	<0.000994	<0.000994	<25.1	<25.1	<25.1	<25.1	<25.1	646
SW01	0 - 1	08/15/2019	<0.000998	<0.000998	<0.000998	<0.000998	<0.000998	<25.1	42.3	<25.1	42.3	42.3	723
SW02	0 - 3	08/15/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<25.1	<25.1	<25.1	<25.1	<25.1	512
SW03	0 - 7	08/15/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<25.0	50.1	<25.0	50.1	50.1	504
SW04	0 - 4	08/15/2019	<0.000998	<0.000998	<0.000998	<0.000998	<0.000998	<25.0	<25.0	<25.0	<25.0	<25.0	43.0
SW05	0 - 5	08/19/2019	<0.500	2.08	2.60	28.4	33.0	615	3,810	<25.0	4,430	**4,430**	188
SW06	0 - 5	08/19/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<24.9	<24.9	<24.9	<24.9	<24.9	56.7
SW07	0 - 7	08/19/2019	<0.000998	0.00107	<0.000998	<0.000998	0.00107	<25.0	<25.0	<25.0	<25.0	<25.0	49.8
SW08	0 - 4	08/19/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<24.9	<24.9	<24.9	<24.9	<24.9	724
SW09	0 - 4	08/19/2019	<0.000994	<0.000994	<0.000994	<0.000994	<0.000994	<25.1	<25.1	<25.1	<25.1	<25.1	42.9
SW10	0 - 4	08/19/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<25.0	86.2	<25.0	86.2	86.2	801
SW11	0 - 4	08/19/2019	<0.000992	<0.000992	<0.000992	<0.000992	<0.000992	<25.1	<25.1	<25.1	<25.1	<25.1	47.0
SW12	0 - 2.5	08/19/2019	<0.000990	<0.000990	<0.000990	<0.000990	<0.000990	<24.9	140	<24.9	140	**140**	1,760
SW13	0 - 2.5	08/19/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<25.1	<25.1	<25.1	<25.1	<25.1	684
SW14	0 - 2.5	08/19/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<25.0	<25.0	<25.0	<25.0	<25.0	1,450
SW15	0 - 2.5	08/19/2019	<0.000998	<0.000998	<0.000998	<0.000998	<0.000998	<25.1	<25.1	<25.1	<25.1	<25.1	238
Background Soil Samples													
PH12	4	08/19/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1,620
PH12A	6	08/19/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2,000
PH13	2	08/19/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1,390
NMOCD Table 1 Closure Criteria			**10**	NE	NE	NE	**50**	NE	NE	NE	NE	**100**	**600**
									Background Chloride Conentration Range (mg/kg)				**<9.88-4,330**

TABLE 1
SOIL ANALYTICAL RESULTS

PICKETT DRAW FEDERAL #001
REMEDIATION PERMIT NUMBER 2RP-5537
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
PH13A	4	08/19/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	903
PH14	2	08/19/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3,340
PH14A	4	08/19/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4,330
PH15	2	08/19/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1,250
PH15A	4	08/19/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1,860
PH16	0.5	11/08/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<9.88
PH16A	1	11/08/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<9.92
PH16B	2	11/08/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<10.0
PH16C	3	11/08/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	97.9
PH16D	4	11/08/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	353
PH16E	6	11/08/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	481
PH16F	8	11/08/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	921
PH16G	10	11/08/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	480
PH16H	12	11/08/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	837
PH16I	14	11/08/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	552
PH16J	16	11/08/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	780
PH16K	18	11/08/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	968
PH16L	20	11/08/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1070
PH17	0.5	11/08/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<10.1
PH17A	1	11/08/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<9.94
PH17B	2	11/08/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<9.96
PH17C	3	11/08/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<9.86
PH17D	4	11/08/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<9.94
PH17E	6	11/08/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	118
PH17F	8	11/08/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	458
PH17G	10	11/08/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	704
NMOCD Table 1 Closure Criteria			**10**	NE	NE	NE	**50**	NE	NE	NE	NE	**100**	**600**
									Background Chloride Conentration Range (mg/kg)				**<9.88-4,330**

TABLE 1
SOIL ANALYTICAL RESULTS

PICKETT DRAW FEDERAL #001
REMEDIATION PERMIT NUMBER 2RP-5537
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
PH17H	12	11/08/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1,060
PH17I	14	11/08/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1,180
PH17J	16	11/08/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	225
PH17K	18	11/08/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1,020
PH17L	20	11/08/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	673
PH18	0.5	11/08/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<9.96
PH18A	1	11/08/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<9.98
PH18B	2	11/08/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<10.1
PH18C	3	11/08/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	43.9
PH18D	4	11/08/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	765
PH18E	6	11/08/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1,550
PH18F	8	11/08/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1,490
PH18G	10	11/08/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1,100
PH18H	12	11/08/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1,110
PH18I	14	11/08/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1,020
PH18J	16	11/08/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	657
PH18K	18	11/08/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	685
PH18L	20	11/08/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	637
NMOCD Table 1 Closure Criteria			**10**	NE	NE	NE	**50**	NE	NE	NE	NE	**100**	**600**
									Background Chloride Conentration Range (mg/kg)				**<9.88-4,330**

Notes:

bgs - below ground surface
BTEX - benzene, toluene, ethylbenzene, and total xylenes
DRO - diesel range organics
GRO - gasoline range organics
mg/kg - milligrams per kilogram
ORO - motor oil range organics
NMAC - New Mexico Administrative Code
NMOCD - New Mexico Oil Conservation Division
TPH - total petroleum hydrocarbons
NE - not established
Bold - indicates result exceeds the applicable regulatory standard
< - indicates result is below laboratory reporting limits
Table 1 - closure criteria for soils impacted by a release per NMAC 19.15.29 August 2018
N/A - not applicable

ATTACHMENT 1: INITIAL/FINAL NMOCD FORM C-141 (2RP-5537)

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	NAB1919955454
District RP	2RP-5537
Facility ID	
Application ID	pAB1919955186

Release Notification

Responsible Party

Responsible Party XTO Energy	OGRID 5380
Contact Name Kyle Littrell	Contact Telephone 432-221-7331
Contact email Kyle_Littrell@xtoenergy.com	Incident # *(assigned by OCD)* NAB1919955454
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.150097° Longitude -103.991664°
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Pickett Draw Federal #001	Site Type Production Well Facility
Date Release Discovered 6/21/2019	API# *(if applicable)* 30-015-25767

Unit Letter	Section	Township	Range	County
C	9	25S	29E	Eddy

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

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) 5.96	Volume Recovered (bbls) 5
☒ Produced Water	Volume Released (bbls) 589.58	Volume Recovered (bbls) 495
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

Flowline failed due to pressure communication with the Pickett Draw Federal #1 from hydraulic frac operations for the Corral Canyon Federal Com 6H well. Fluids were released to the well pad and pasture to the NW (approx 60 ft) and misting to the NE (approx 180 ft). Vacuum trucks recovered free fluids. Additional third party resources have been retained to assist with remediation.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NAB1919955454
District RP	2RP-5537
Facility ID	
Application ID	pAB1919955186

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? An unauthorized release of a volume of 25 barrels or more

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?
Notice provided by Bryan Foust to Mike Bratcher, Rob Hamlet, Victoria Venegas, and Jim Griswold (NMOCD), and Jim Amos and Deborah McKinney (BLM), on 6/22/2019 by email

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:
N/A

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: Amy C. Ruth
Title: SH&E Coordinator
Signature:
Date: 7/2/2019
email: Amy_Ruth@xtoenergy.com
Telephone: 575-689-3380

OCD Only

Received by: Amalia Bustamante
Date: 7/18/2019

Form C-141
Page 3

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	2RP-5537
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?	51-100 (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.

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	2RP-5537
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: Kyle Littrell Title: SH&E Supervisor

Signature: Date:

email: Kyle_Littrell@xtoenergy.com Telephone: (432)-221-7331

OCD Only

Received by: Date:

Form C-141
Page 5

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	2RP-5537
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: Kyle Littrell Title: SH&E Supervisor

Signature: Date:

email: Kyle_Littrell@xtoenergy.com Telephone: (432)-221-7331

OCD Only

Received by: Date:

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

Signature: Date:

ATTACHMENT 2: LITHOLOGIC / SOIL SAMPLE LOGS

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220

Compliance · Engineering · Remediation

Identifier: PH01	Date: 08/02/09
Project Name: Pickett Draw	RP Number: 2RP-5537
Logged By: L. Lauxbach	Method: trackhoe
Hole Diameter: 2'	Total Depth: 4'
Field Screening: PID, chloride	

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
dry/moist		29.6	N		1'			SAND, sandy loam, light brown
	648 (4.0)	8.5	N	PH01	2'		SW-SM	
					3			
	48 (3.4)	5.9	N	PH01A	4			
					5			deepest depth
					6			
					7			
					8			
					9			
					10			
					11			
					12			

LT Environmental, Inc.
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Identifier: PH02	Date: 08/02/019
Project Name: Pickett Draw Fed 1	RP Number: 2RP 5537
Logged By: L. Lambert	Method: trackhoe
Hole Diameter: 2'	Total Depth: 6'
Lat/Long:	Field Screening: PID, chloride

LITHOLOGIC / SOIL SAMPLING LOG

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
dry/moist	648 (4.0)	3.8	N		1			~~Sand~~ w/silt, settle quickly, light brown/tan
							SW-SM	dry, Nodes
	128 (1.9)	12.7	N	PH02	2			
					3			
	<128 (1.2)	13.3	N		4			
					5			
	<128 (<1.0)	3.8	N	PH02A	6			
					7			deepest depth
					8			
					9			
					10			
					11			
					12			

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Identifier: PH03	Date: 08/02/2019
Project Name: Pickett Draw Fed 1	RP Number: 2RP-5537
Logged By: L. Lamb	Method: trackhoe
Hole Diameter: 2'	Total Depth: 26'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening: PID, chloride strips

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
dry	~~1144~~	>1500	Y	1	1		SW-SM	SAND, sandy loam, silt, dry, odor
damp	1144 (5.4)	>1500	Y	PH03	2			
							CALICHE	CALICHE, dry, rocky, odor
					3			
dry	1420 (6.0)	>1500	Y		4			
					5			
dry	768 (4.4)	>1500	N		6			
					7			
dry	708 (4.2)	>1500	N		8			
					9			
dry	884 (5.0)	143.2	N		10			
					11			
dry	980	>1500	N		12			

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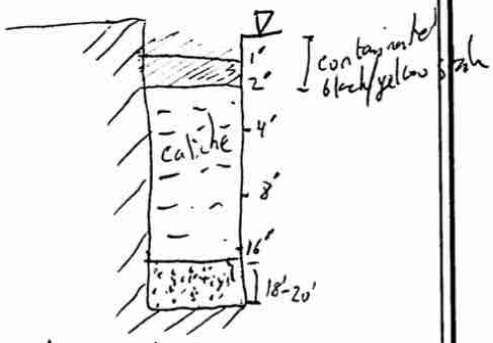
Identifier: PH04	Date: 08/02/2019
Project Name: Pickett Draw Fed 1	RP Number: 2RP-5537
Logged By: L. Lambert	Method: trackhoe
Hole Diameter: 2'	Total Depth: 20'
Field Screening: PID, chloride strips	
Lat/Long:	

08/08/2019

LITHOLOGIC / SOIL SAMPLING LOG

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
					1			
dry	352 (2.8)	>15000	Y	PH04	2		CALICHE	CALICHE, dry yellow/stain, odor
					3			
dry	<128 (<1)	>15000	N		4			CALICHE, dry, white/tan odor
					5			
dry	<128 (<1)	>15000	N		6			
					7			
dry	<128 (<1)	>15000	N		8			CALICHE, white, damp, odor
					9			
	<128 (<1)	>15000	N		10			
					11			
	<128 (<1)	>15000	N		12			



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Identifier: PH04 cntd	Date: 08/05/2019
Project Name: Pickett Draw Fed #001	RP Number: 2RP 5537
Logged By: L. Lambert	Method: trackhoe
Hole Diameter: 2'	Total Depth: 20'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening: PID, chlorides

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
dry	<128	>15000	N		~~1~~ 16'			CALICHE, rocky 1/8", odor while dry
					~~2~~			
dry	<128	>15000	N		~~3~~ 18'		SP	SAND, coarse <10% fines, pink tan, dry
					~~4~~			
dry	<128	>15000	N	PH04A	~~5~~ 20'			
					6			deepest trackhoe depth
					7			
					8			
					9			
					10			
					11			
					12			

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Identifier: PH05	Date: 08/05/2019
Project Name: Pickett Draw Fed 1	RP Number: 2RP 5537
Logged By: L. Lamback	Method: trackhoe
Hole Diameter: 2'	Total Depth: 14'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening: PID, chloride strips

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
					1		SW-SM	topsoil SAND
	<128 (<1)	>1500	N	PH05	2			~~CALICHE~~ SAND, light brown, odor ~ visible staining
								~70ppm offgassing from around pothole
					3			odor similar to spraypaint
	180 (1.8)	>1500	N		4			
								4.5' caliche, broken/shattered light tan/off white, odor
					5		CALICHE	
	276 ~~(2.0)~~ (2.0)	>1500 ~~22.1~~	N		6			
					7			
	—	>1500	N		8			
					9			
	~~(9.0)~~	>1500 ~~14.7~~	N		10			
					11			
	908 (4.8)	>1500	N		12			

>1500 PH05A 14' trackhoe refusal

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Carlsbad, New Mexico 88220
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Identifier: PH-6	Date: 08/05/2019
Project Name: Pickett Draw Fed #1	RP Number: 2RP - 5537
Logged By: L. Laumbach	Method: backhoe
Hole Diameter: 2'	Total Depth: 20'
Field Screening: PID, chlorides	

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
					1			
damp	396 (3.0)	67.2	N	PH06	2		SW-SM	N odor SAND, silty vegetation still alive Nonplastic, brown
					3			
damp	648 (4.0)	59.3	N		4			
moist					5			caliche, damp, cobbly N odor light tan/yellow
	2016 (7.0)	22.1	N		6		CALICHE	
					7			
damp	>2492 (8.5)		N		8			
					9			
damp	>2492 (9.0)	44.7	N		10			
					11			
dry	>2492 (9.5)	24.1	N		12			Sand, pink hue damp

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Identifier: PH06 cntd	Date: 08/05/2019
Project Name: Pickett Draw Fed #1	RP Number: 2RP-5537
Logged By: L. Laumbach	Method: trackhoe
Hole Diameter: 2'	Total Depth: 20'

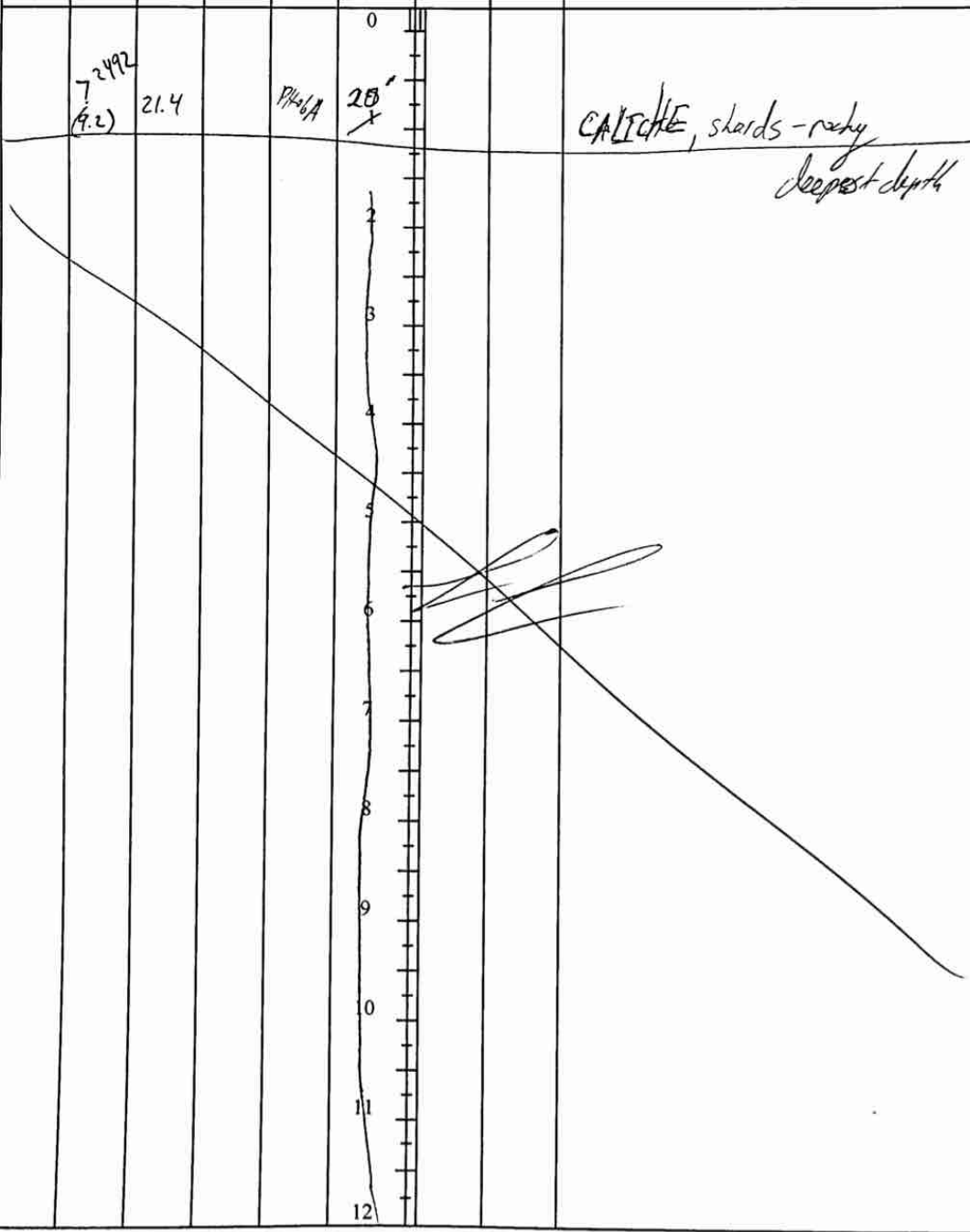
LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening: PID, chlorides

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
	7 2492 (9.2)	21.4		PH06A	20' X			CALICHE, shards - rocky deepest depth



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Identifier: PH07	Date: 08/05/2019
Project Name: Pickett Draw Fed #1	RP Number: 2RP 5537
Logged By: L. Laumbach	Method: trackhoe
Hole Diameter: 2'	Total Depth: 6'
Field Screening: PID, chlorides	
Lat/Long:	

LITHOLOGIC / SOIL SAMPLING LOG

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
					1			
dry	836 (9.6)	~~1622~~		PH07	2'		SW (SM)	SAND, silty, >30% fines, no odor brown
					3			
dry	312 (2.6)	12.2			4			
					5			
dry	396 (3.0)	9.4		PH07A	6			CALICHE, nodular, white
					7			deepest depth
					8			
					9			
					10			
					11			
					12			

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Identifier: PH08	Date: 08/05/2019
Project Name: Pickett Drawfed #1	RP Number: 2RP 5537
Logged By: L. Lambert	Method: trackhoe
Hole Diameter: 2'	Total Depth: 6'
Field Screening: PID, chlorides	

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			CALICHE - Pad
					1			
N dry	<128	10.2	N	PH08	2		Sw-Sm	SAND, silty, N odor, brown
					3			
dry	<128	13.0	N		4			CALICHE, white, slwhite, N odor
					5			
dry	<128	14.2	N	PH08A	6			
								deepest depth
					7			
					8			
					9			
					10			
					11			
					12			

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Identifier: PH09	Date: 08/05/2019
Project Name: Pickett Draw Fed #001	RP Number: 2RP 5537
Logged By: L. Laumbach	Method: trackhoe
Hole Diameter: 2'	Total Depth: 4'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening: PID, chlorides

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
					1			
dry	<128	30.1	N	PH09	2'		Slv-Sm	SAND, silty, no odor brown
					3			CALICHE, white, no odor
dry	164	16.9	N	PH09A	4'			
					5			deepest depth
					6			
					7			
					8			
					9			
					10			
					11			
					12			

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Identifier: PH10	Date: 08/15/2019
Project Name: Pickett Draw Fed #1	RP Number: 2RP 5537
Logged By: L. Lambach	Method: trackhe
Hole Diameter: 2'	Total Depth: 4' ft

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long: 32.150207, -103.991581
Field Screening: PID
Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
					1			
					2			
					3			Open excavation
					4			
					5			
					6			
dry	(3.4)	73.2		PH10	7			CALICHE, odor
					8			
dry		58.5			9		+SP	CALICHE, sand mix, odor, white/tan + light tan
					10			
dry	(4.6)	14.9			11			CALICHE No odor, white/tan
					12			

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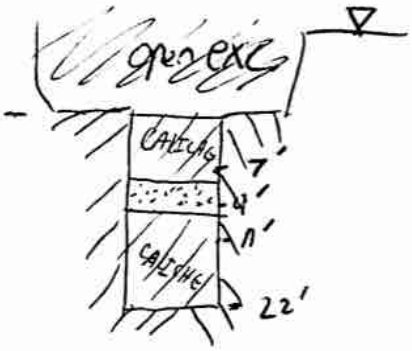
Identifier: PH10 cont'd	Date: 08/15/2019
Project Name: Pickett Draw Fed #1	RP Number: 2RP 5537
Logged By: L. Lambuth	Method: trackhoe
Lat/Long:	Field Screening: PID
Hole Diameter:	Total Depth:

LITHOLOGIC / SOIL SAMPLING LOG

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
dry	(6.4)	23.4			2	15'		← CALICHE, white, no odor hard to dig through
dry	(6.4)	17.7			6	19'		
dry	(6.4)	9.2		PH10A	9	22'		
					10			Trackhoe reach
					11			
					12			



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Identifier: PH11	Date: 08/19/2015
Project Name: Pickett Draw Fed 1	RP Number: 2RP-5537
Logged By: L. Lambert	Method: backhoe
Hole Diameter: 2'	Total Depth: 4'
Lat/Long: 32.15006108, -103.9916796	Field Screening: PID, chlorides

LITHOLOGIC / SOIL SAMPLING LOG

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm) (PID)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			CALICHE, non native
					1			
dry		7			2'			SAND, silt, no odor
					3			
dry		23.1			4'			SAND, silt
					5			deepest depth
					6			
					7			
					8			
					9			
					10			
					11			
					12			

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Carlsbad, New Mexico 88220
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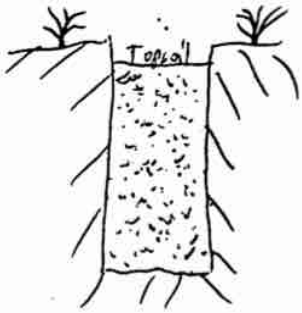
Identifier: PH12	Date: 08/19/2019
Project Name: Pickett Draw Fed 1	RP Number: 2RP 5537
Logged By: L. Laumbach	Method: trackhoe
Hole Diameter: 2'	Total Depth: 8'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long: 32.1974786, -103.9923859
Field Screening: PID, chlorides
Comments: ~~background sample~~

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			Topsoil, Brown
					1			
Dry		0.0	✓		2'		SP	SAND, reddish yellow, N odor/N stain non plastic, dry ~1" rocks, interspersed
					3			
Dry	1420	23.1 ~~0.0~~	✓	PH12	4'			SAND
					5			
Dry		0.0	✓		6'			SAND
					7			
Dry	1636	0.0	✓	PH12A	8'			SAND
					9			deepest depth
					10			
					11			
					12			



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Carlsbad, New Mexico 88220

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Identifier: PH13	Date: 08/19/2021
Project Name: Pickett Draw Fed #1	RP Number: 2RP 5537
Logged By: L. Lemmbach	Method: trackhoe
Hole Diameter: 2'	Total Depth: 4'
Lat/Long: 32.15067003, -103.9916679	Field Screening: PID

LITHOLOGIC / SOIL SAMPLING LOG

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
					1			
dry	/	3.7	/	PH13	2		SM	SAND, silty, brown, No odor
					3			
dry	/	3.4	/	PH13A	4		SM	
					5			deepest depth
					6			
					7			
					8			
					9			
					10			
					11			
					12			

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508 West Stevens Street
Carlsbad, New Mexico 88220

Compliance · Engineering · Remediation

Identifier: PH14	Date: 08/19/2019
Project Name: Pickett Draw Fed #1	RP Number: 2RP 5537
Logged By: L. Lambuth	Method: trackhoe
Hole Diameter: 2'	Total Depth: 4'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long: 32.15049295, -103.99178549
Field Screening: PID
Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
					1			
dry	/	0.9	/	PH14	2		SM	SAND, silty, brown, moist
					3			
dry	/	0.0	/	PH14A	4		SM	
					5			deepest depth
					6			
					7			
					8			
					9			
					10			
					11			
					12			

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Identifier: PH15	Date: 08/19/2019
Project Name: Pickett Draw Fed #1	RP Number: 2RP-5537
Logged By: L. Lamb	Method: trackhoe
Hole Diameter: 2'	Total Depth: 4'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long: 32.150314, -103.9922586
Field Screening: PID
Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
					1			
dry	✓	0.0	N	PH15	2		SM	SAND, silty, brown, no odor
					3			
dry	✓	0.0	N	PH15A	4		SM	
					5			deepest depth
					6			
					7			
					8			
					9			
					10			
					11			
					12			

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Identifier: Background PH01	Date: 11/8/19
Project Name: Pickett Draw Federal #001	RP Number: 2RP-5537
Logged By: Anna Byers	Method: Track Hoe
Hole Diameter: N/A	Total Depth: 20 feet

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long: Refer to Collector

Field Screening: PID and HACH Choride Test Strips

Comments: Chloride tests were performed with an aliquot of a 1 part soil: 4 parts distilled water mixture

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
DRY	<112	0	NO	PH01		0.5 ft	SP-SM	light brown poorly graded sand (m.) with silt & gravel, no plasticity, no odor with trace organics
DRY	<112	0	NO	PH01A	1	1.0 ft	SP-SM	
DRY	<112	0	NO	PH01B	2	2.0 ft	SP-SM	
DRY	112	0	NO	PH01C	3	3.0 ft	SP-SM	brown poorly graded sand (m.) with silt, no plasticity, no odor
DRY	388	0	NO	PH01D	4	4.0 ft	SP	brown poorly graded sand (m.), no plasticity, no odor
					5			
DRY	580	0	NO	PH01E	6	6.0 ft	SP	
					7			
DRY	820	0	NO	PH01F	8	8.0 ft	caliche	light tan, poorly cemented sandy (F-c.) matrix
					9			
DRY	692	0	NO	PH01G	10	10.0 ft	caliche	
					11			
DRY	432	0	NO	PH01H	12	12.0 ft	SP	brown poorly graded sand (m.), no plasticity, no odor

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Identifier: Background PH01	Date: 11/8/19
Project Name: Pickett Draw Federal #001	RP Number: 2RP-5537
Logged By: Anna Byers	Method: Track Hoe
Hole Diameter: N/A	Total Depth: 20 feet

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long: Refer to Collector

Field Screening: PID and HACH Choride Test Strips

Comments: Chloride tests were performed with an aliquot of a 1 part soil: 4 parts distilled water mixture

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					13			
DRY	524	0	NO	PH01I	14	14.0 ft	SP	brown poorly graded sand (m.-c.) ~~with gravel~~, no plasticity, no odor
					15			
DRY	756	0	NO	PH01J	16	16.0 ft	caliche	light tan, poorly-moderately cemented sandy (f.-m.) matrix
					17			
DRY	1040	0	NO	PH01K	18	18.0 ft	caliche	tan poorly-moderately cemented sandy (f.-m.) matrix
					19			
DRY	1388	0	NO	PH01L	20	20.0 ft	caliche	
								TOTAL DEPTH
					21			
					22			
					23			
					24			
					25			

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Identifier: Background PH02	Date: 11/8/19
Project Name: Pickett Draw Federal #001	RP Number: 2RP-5537
Logged By: Anna Byers	Method: Track Hoe
Hole Diameter: N/A	Total Depth: 20 feet

SOIL SAMPLING LOG

Lat/Long: Refer to Collector

Field Screening: PID and HACH Choride Test Strips

Comments: Chloride tests were performed with an aliquot of a 1 part soil: 4 parts distilled water mixture

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
DRY	ND	0	NO	PH02		0.5 ft	SP-SM	brown poorly graded sand (m.) with silt & gravel, no plasticity, no odor with trace organics
DRY	ND	0	NO	PH02A	1	1.0 ft	SP-SM	
DRY	ND	0	NO	PH02B	2	2.0 ft	SP	brown poorly graded sand (m.), no plasticity, no odor with trace organics
DRY	ND	0	NO	PH02C	3	3.0 ft	SP	
DRY	ND	0	NO	PH02D	4	4.0 ft	SP	
					5			
DRY	496	0	NO	PH02E	6	6.0 ft	SP	brown poorly graded sand (m.) with gravel (5mm-15mm), no plasticity, no odor
					7			
DRY	ND	0	NO	PH02F	8	8.0 ft	SP	brown, poorly graded sand (m.) with gravel (5mm-15mm), no plasticity, no odor
					9			
DRY	600	0	NO	PH02G	10	10.0 ft	SW	lt. brown well graded sand (m-c.), no plasticity, no odor
					11			
DRY	896	0	NO	PH02H	12	12.0 ft	SW	lt. brown well graded sand (m-c.) with gravel (10mm-20mm), no plasticity, no odor

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Identifier: Background PH02	Date: 11/8/19
Project Name: Pickett Draw Federal #001	RP Number: 2RP-5537
Logged By: Anna Byers	Method: Track Hoe
Hole Diameter: N/A	Total Depth: 20 feet

SOIL SAMPLING LOG

Lat/Long: Refer to Collector

Field Screening: PID and HACH Choride Test Strips

Comments: Chloride tests were performed with an aliquot of a 1 part soil: 4 parts distilled water mixture

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					13			
DRY	896	0	NO	PH02I	14	14.0 ft	caliche	light tan, moderately cemented sandy (m.) matrix
					15			
DRY	896	0	NO	PH02J	16	16.0 ft	caliche	white, moderately cemented sandy (m.) matrix
					17			
DRY	712	0	NO	PH02K	18	18.0 ft	caliche	light tan, moderately cemented sandy (m.) matrix
					19			
DRY	896	0	NO	PH02L	20	20.0 ft	caliche	light tan, poorly cemented sandy (m.) matrix
								TOTAL DEPTH
					21			
					22			
					23			
					24			
					25			

LT Environmental, Inc.
508 West Stevens Street
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Identifier: Background PH03	Date: 11/8/19
Project Name: Pickett Draw Federal #001	RP Number: 2RP-5537
Logged By: Anna Byers	Method: Track Hoe
Hole Diameter: N/A	Total Depth: 20 feet

SOIL SAMPLING LOG

Lat/Long: Refer to Collector

Field Screening: PID and HACH Choride Test Strips

Comments: Chloride tests were performed with an aliquot of a 1 part soil: 4 parts distilled water mixture

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
DRY	ND	0	NO	PH03		0.5 ft	SP-SM	brown poorly graded sand (m.) with silt, no plasticity, no odor with trace organics
DRY	ND	0	NO	PH03A	1	1.0 ft	SP-SM	
DRY	ND	0	NO	PH03B	2	2.0 ft	SP-SM	light brown poorly graded sand (m.) with silt & gravel (4.75mm-10mm), no plasticity, no odor. with trace organics
DRY	ND	0	NO	PH03C	3	3.0 ft	SP-SM	
DRY	600	0	NO	PH03D	4	4.0 ft	SP-SM	
					5			
DRY	1184	0	NO	PH03E	6	6.0 ft	SW	light brown well graded sand (f.-c.) with gravel (4.75-10mm), no plasticity, no odor with trace organics
					7			
DRY	1348	0	NO	PH03F	8	8.0 ft	caliche	light tan, moderately cemented sandy (m.) matrix
					9			
DRY	832	0	NO	PH03G	10	10.0 ft	caliche	light tan, well cemented sandy (m.) matrix
					11			
DRY	896	0	NO	PH03H	12	12.0 ft	caliche	

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Identifier: Background PH03	Date: 11/8/19
Project Name: Pickett Draw Federal #001	RP Number: 2RP-5537
Logged By: Anna Byers	Method: Track Hoe
Hole Diameter: N/A	Total Depth: 20 feet

/ SOIL SAMPLING LOG

Lat/Long: Refer to Collector

Field Screening: PID and HACH Choride Test Strips

Comments: Chloride tests were performed with an aliquot of a 1 part soil: 4 parts distilled water mixture and back-calculated with a 4x dilution factor
ND: Not detected on Hach Chloride Test Strips (Low Range)

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					13			
DRY	896	0	NO	PH03I	14	14.0 ft	caliche	light tan, well cemented sandy (m.) matrix
					15			
DRY	544	0	NO	PH03J	16	16.0 ft	SW	light brown well graded sand (m.c.) no plasticity, no odor
					17			
DRY	652	0	NO	PH03K	18	18.0 ft	caliche	light tan, poorly cemented sandy (m.) matrix
					19			
DRY	712	0	NO	PH03L	20	20.0 ft	SP	light tan, poorly graded sand (m.), no plasticity, no odor
								TOTAL DEPTH
					21			
					22			
					23			
					24			
					25			

ATTACHMENT 3: PHOTOGRAPHIC LOG

View of track-mounted backhoe advancing pothole PH16 during background soil sampling activities.

Project: 012919150	XTO Energy, Inc. Pickett Draw Federal #001	Advancing Opportunity
November 8, 2019	Photographic Log	

View of pothole PH20 completed at depth 20 feet bgs during background soil sampling activities.

Project: 012919150	XTO Energy, Inc. Pickett Draw Federal #001	Advancing Opportunity
November 8, 2019	Photographic Log	

ATTACHMENT 4: LABORATORY ANALYTICAL REPORTS

Analytical Report 630592

for

LT Environmental, Inc.

Project Manager: Dan Moir

Pickett Draw Fed #001

16-JUL-19

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-29), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-19-19), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429), North Carolina (483)

16-JUL-19

Project Manager: **Dan Moir**
LT Environmental, Inc.
4600 W. 60th Avenue
Arvada, CO 80003

Reference: XENCO Report No(s): **630592**
Pickett Draw Fed #001
Project Address: Delaware Basin

Dan Moir:

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) 630592. 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. 630592 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

Sample Cross Reference 630592

LT Environmental, Inc., Arvada, CO

Pickett Draw Fed #001

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01	S	07-10-19 00:00	0.5 ft	630592-001
SS02	S	07-10-19 00:00	0.5 ft	630592-002
SS03	S	07-10-19 00:00	0.5 ft	630592-003
SS04	S	07-10-19 00:00	0.5 ft	630592-004

CASE NARRATIVE

Client Name: LT Environmental, Inc.
Project Name: Pickett Draw Fed #001

Project ID:
Work Order Number(s): *630592*

Report Date: *16-JUL-19*
Date Received: *07/11/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3095299 TPH by SW8015 Mod
Surrogate o-Terphenyl recovered above QC limits. Matrix interferences is suspected.
Samples affected are: 630592-001,630592-003,630592-002.

Batch: LBA-3095416 Chloride by EPA 300
Lab Sample ID 630592-002 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride 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: 630592-001, -002, -003, -004.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3095520 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 630592-001,630592-003,630592-002.

Certificate of Analysis Summary 630592

LT Environmental, Inc., Arvada, CO

Project Name: Pickett Draw Fed #001

Project Id:
Contact: Dan Moir
Project Location: Delaware Basin

Date Received in Lab: Thu Jul-11-19 12:48 pm
Report Date: 16-JUL-19
Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	630592-001		630592-002		630592-003		630592-004			
	Field Id:	SS01		SS02		SS03		SS04			
	Depth:	0.5- ft		0.5- ft		0.5- ft		0.5- ft			
	Matrix:	SOIL		SOIL		SOIL		SOIL			
	Sampled:	Jul-10-19 00:00		Jul-10-19 00:00		Jul-10-19 00:00		Jul-10-19 00:00			
BTEX by EPA 8021B SUB: T104704400-18-16	***Extracted:***	Jul-13-19 15:20		Jul-13-19 15:20		Jul-13-19 15:20		Jul-13-19 15:20			
	Analyzed:	Jul-15-19 02:44		Jul-15-19 03:06		Jul-15-19 03:28		Jul-15-19 05:29			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Benzene		<0.198	0.198	0.587	0.399	2.85	0.397	<0.00200	0.00200		
Toluene		1.50	0.198	18.8	0.399	50.2	0.397	<0.00200	0.00200		
Ethylbenzene		1.39	0.198	15.1	0.399	16.7	0.397	<0.00200	0.00200		
m,p-Xylenes		10.1	0.395	97.3	0.798	96.2	0.794	<0.00399	0.00399		
o-Xylene		3.67	0.198	33.3	0.399	41.0	0.397	<0.00200	0.00200		
Total Xylenes		13.8	0.198	131	0.399	137	0.397	<0.00200	0.00200		
Total BTEX		16.7	0.198	165	0.399	207	0.397	<0.00200	0.00200		
Chloride by EPA 300 SUB: T104704400-18-16	***Extracted:***	Jul-15-19 11:00		Jul-15-19 11:00		Jul-15-19 11:00		Jul-15-19 11:00			
	Analyzed:	Jul-15-19 14:07		Jul-15-19 15:54		Jul-15-19 16:44		Jul-15-19 16:52			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Chloride		452	4.98	135	5.00	843	5.00	2600	24.8		
TPH by SW8015 Mod SUB: T104704400-18-16	***Extracted:***	Jul-13-19 10:00		Jul-13-19 10:00		Jul-13-19 10:00		Jul-13-19 10:00			
	Analyzed:	Jul-14-19 05:29		Jul-14-19 05:53		Jul-14-19 06:16		Jul-14-19 06:40			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Gasoline Range Hydrocarbons (GRO)		1420	74.9	4120	74.8	5590	74.7	<15.0	15.0		
Diesel Range Organics (DRO)		12800	74.9	20000	74.8	14000	74.7	28.4	15.0		
Motor Oil Range Hydrocarbons (MRO)		640	74.9	823	74.8	654	74.7	<15.0	15.0		
Total TPH		14900	74.9	24900	74.8	20200	74.7	28.4	15.0		
Total GRO-DRO		14200	74.9	24100	74.8	19600	74.7	28.4	15.0		

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

Jessica Kramer
Project Assistant

Certificate of Analytical Results 630592

LT Environmental, Inc., Arvada, CO

Pickett Draw Fed #001

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	07.11.19 12.48
Lab Sample Id:	630592-001	Date Collected:	07.10.19 00.00	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	07.15.19 11.00	Basis:	Wet Weight
Seq Number:	3095416			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**452**	4.98	mg/kg	07.15.19 14.07		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	07.13.19 10.00	Basis:	Wet Weight
Seq Number:	3095299			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**1420**	74.9	mg/kg	07.14.19 05.29		5
Diesel Range Organics (DRO)	C10C28DRO	**12800**	74.9	mg/kg	07.14.19 05.29		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**640**	74.9	mg/kg	07.14.19 05.29		5
Total TPH	PHC635	**14900**	74.9	mg/kg	07.14.19 05.29		5
Total GRO-DRO	PHC628	**14200**	74.9	mg/kg	07.14.19 05.29		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	122	%	70-135	07.14.19 05.29	
o-Terphenyl	84-15-1	236	%	70-135	07.14.19 05.29	**

Certificate of Analytical Results 630592

LT Environmental, Inc., Arvada, CO

Pickett Draw Fed #001

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	07.11.19 12.48
Lab Sample Id:	630592-001	Date Collected:	07.10.19 00.00	Sample Depth:	0.5 ft

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	AMB			% Moisture:	
Analyst:	AMB	Date Prep:	07.13.19 15.20	Basis:	Wet Weight
Seq Number:	3095520			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.198	0.198	mg/kg	07.15.19 02.44	U	100
Toluene	108-88-3	**1.50**	0.198	mg/kg	07.15.19 02.44		100
Ethylbenzene	100-41-4	**1.39**	0.198	mg/kg	07.15.19 02.44		100
m,p-Xylenes	179601-23-1	**10.1**	0.395	mg/kg	07.15.19 02.44		100
o-Xylene	95-47-6	**3.67**	0.198	mg/kg	07.15.19 02.44		100
Total Xylenes	1330-20-7	**13.8**	0.198	mg/kg	07.15.19 02.44		100
Total BTEX		**16.7**	0.198	mg/kg	07.15.19 02.44		100

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	149	%	70-130	07.15.19 02.44	**
1,4-Difluorobenzene	540-36-3	95	%	70-130	07.15.19 02.44	

Certificate of Analytical Results 630592

LT Environmental, Inc., Arvada, CO

Pickett Draw Fed #001

Sample Id: **SS02** Matrix: Soil Date Received: 07.11.19 12.48
Lab Sample Id: 630592-002 Date Collected: 07.10.19 00.00 Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: CHE % Moisture:
Analyst: CHE Date Prep: 07.15.19 11.00 Basis: Wet Weight
Seq Number: 3095416 SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**135**	5.00	mg/kg	07.15.19 15.54		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: DVM % Moisture:
Analyst: ARM Date Prep: 07.13.19 10.00 Basis: Wet Weight
Seq Number: 3095299 SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**4120**	74.8	mg/kg	07.14.19 05.53		5
Diesel Range Organics (DRO)	C10C28DRO	**20000**	74.8	mg/kg	07.14.19 05.53		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**823**	74.8	mg/kg	07.14.19 05.53		5
Total TPH	PHC635	**24900**	74.8	mg/kg	07.14.19 05.53		5
Total GRO-DRO	PHC628	**24100**	74.8	mg/kg	07.14.19 05.53		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-135	07.14.19 05.53	
o-Terphenyl	84-15-1	281	%	70-135	07.14.19 05.53	**

Certificate of Analytical Results 630592

LT Environmental, Inc., Arvada, CO

Pickett Draw Fed #001

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	07.11.19 12.48
Lab Sample Id:	630592-002	Date Collected:	07.10.19 00.00	Sample Depth:	0.5 ft

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	AMB			% Moisture:	
Analyst:	AMB	Date Prep:	07.13.19 15.20	Basis:	Wet Weight
Seq Number:	3095520			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.587**	0.399	mg/kg	07.15.19 03.06		200
Toluene	108-88-3	**18.8**	0.399	mg/kg	07.15.19 03.06		200
Ethylbenzene	100-41-4	**15.1**	0.399	mg/kg	07.15.19 03.06		200
m,p-Xylenes	179601-23-1	**97.3**	0.798	mg/kg	07.15.19 03.06		200
o-Xylene	95-47-6	**33.3**	0.399	mg/kg	07.15.19 03.06		200
Total Xylenes	1330-20-7	**131**	0.399	mg/kg	07.15.19 03.06		200
Total BTEX		**165**	0.399	mg/kg	07.15.19 03.06		200

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	98	%	70-130	07.15.19 03.06	
4-Bromofluorobenzene	460-00-4	197	%	70-130	07.15.19 03.06	**

Certificate of Analytical Results 630592

LT Environmental, Inc., Arvada, CO

Pickett Draw Fed #001

Sample Id: **SS03**
Lab Sample Id: 630592-003

Matrix: Soil
Date Collected: 07.10.19 00.00

Date Received: 07.11.19 12.48
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300
Tech: CHE
Analyst: CHE
Seq Number: 3095416

Date Prep: 07.15.19 11.00

Prep Method: E300P
% Moisture:
Basis: Wet Weight
SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**843**	5.00	mg/kg	07.15.19 16.44		1

Analytical Method: TPH by SW8015 Mod
Tech: DVM
Analyst: ARM
Seq Number: 3095299

Date Prep: 07.13.19 10.00

Prep Method: TX1005P
% Moisture:
Basis: Wet Weight
SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**5590**	74.7	mg/kg	07.14.19 06.16		5
Diesel Range Organics (DRO)	C10C28DRO	**14000**	74.7	mg/kg	07.14.19 06.16		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**654**	74.7	mg/kg	07.14.19 06.16		5
Total TPH	PHC635	**20200**	74.7	mg/kg	07.14.19 06.16		5
Total GRO-DRO	PHC628	**19600**	74.7	mg/kg	07.14.19 06.16		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	124	%	70-135	07.14.19 06.16	
o-Terphenyl	84-15-1	233	%	70-135	07.14.19 06.16	**

Certificate of Analytical Results 630592

LT Environmental, Inc., Arvada, CO

Pickett Draw Fed #001

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	07.11.19 12.48
Lab Sample Id:	630592-003	Date Collected:	07.10.19 00.00	Sample Depth:	0.5 ft

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	AMB			% Moisture:	
Analyst:	AMB	Date Prep:	07.13.19 15.20	Basis:	Wet Weight
Seq Number:	3095520			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**2.85**	0.397	mg/kg	07.15.19 03.28		200
Toluene	108-88-3	**50.2**	0.397	mg/kg	07.15.19 03.28		200
Ethylbenzene	100-41-4	**16.7**	0.397	mg/kg	07.15.19 03.28		200
m,p-Xylenes	179601-23-1	**96.2**	0.794	mg/kg	07.15.19 03.28		200
o-Xylene	95-47-6	**41.0**	0.397	mg/kg	07.15.19 03.28		200
Total Xylenes	1330-20-7	**137**	0.397	mg/kg	07.15.19 03.28		200
Total BTEX		**207**	0.397	mg/kg	07.15.19 03.28		200

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	94	%	70-130	07.15.19 03.28	
4-Bromofluorobenzene	460-00-4	212	%	70-130	07.15.19 03.28	**

Certificate of Analytical Results 630592

LT Environmental, Inc., Arvada, CO

Pickett Draw Fed #001

Sample Id:	**SS04**	Matrix:	Soil	Date Received:	07.11.19 12.48
Lab Sample Id:	630592-004	Date Collected:	07.10.19 00.00	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	07.15.19 11.00	Basis:	Wet Weight
Seq Number:	3095416			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2600**	24.8	mg/kg	07.15.19 16.52		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	07.13.19 10.00	Basis:	Wet Weight
Seq Number:	3095299			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.14.19 06.40	U	1
Diesel Range Organics (DRO)	C10C28DRO	**28.4**	15.0	mg/kg	07.14.19 06.40		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.14.19 06.40	U	1
Total TPH	PHC635	**28.4**	15.0	mg/kg	07.14.19 06.40		1
Total GRO-DRO	PHC628	**28.4**	15.0	mg/kg	07.14.19 06.40		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	07.14.19 06.40	
o-Terphenyl	84-15-1	100	%	70-135	07.14.19 06.40	

Certificate of Analytical Results 630592

LT Environmental, Inc., Arvada, CO

Pickett Draw Fed #001

Sample Id:	**SS04**	Matrix:	Soil	Date Received:	07.11.19 12.48
Lab Sample Id:	630592-004	Date Collected:	07.10.19 00.00	Sample Depth:	0.5 ft

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	AMB			% Moisture:	
Analyst:	AMB	Date Prep:	07.13.19 15.20	Basis:	Wet Weight
Seq Number:	3095520			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.15.19 05.29	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.15.19 05.29	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.15.19 05.29	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	07.15.19 05.29	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.15.19 05.29	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.15.19 05.29	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.15.19 05.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	70-130	07.15.19 05.29	
1,4-Difluorobenzene	540-36-3	91	%	70-130	07.15.19 05.29	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 630592

LT Environmental, Inc.

Pickett Draw Fed #001

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3095416 Matrix: Solid Date Prep: 07.15.19
MB Sample Id: 7682025-1-BLK LCS Sample Id: 7682025-1-BKS LCSD Sample Id: 7682025-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	240	96	240	96	90-110	0	20	mg/kg	07.15.19 13:52	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3095416 Matrix: Soil Date Prep: 07.15.19
Parent Sample Id: 630592-001 MS Sample Id: 630592-001 S MSD Sample Id: 630592-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	452	249	671	88	672	88	90-110	0	20	mg/kg	07.15.19 14:19	X

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3095416 Matrix: Soil Date Prep: 07.15.19
Parent Sample Id: 630592-002 MS Sample Id: 630592-002 S MSD Sample Id: 630592-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	135	250	367	93	367	93	90-110	0	20	mg/kg	07.15.19 16:01	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3095299 Matrix: Solid Date Prep: 07.13.19
MB Sample Id: 7681985-1-BLK LCS Sample Id: 7681985-1-BKS LCSD Sample Id: 7681985-1-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)	<8.00	1000	1160	116	1150	115	70-135	1	20	mg/kg	07.13.19 21:28	
Diesel Range Organics (DRO)	<8.13	1000	1120	112	1180	118	70-135	5	20	mg/kg	07.13.19 21:28	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	105		97		94		70-135	%	07.13.19 21:28
o-Terphenyl	108		104		111		70-135	%	07.13.19 21:28

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 630592

LT Environmental, Inc.

Pickett Draw Fed #001

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3095299 Matrix: Soil Date Prep: 07.13.19
Parent Sample Id: 630566-032 MS Sample Id: 630566-032 S MSD Sample Id: 630566-032 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)	9.89	997	1040	103	1070	106	70-135	3	20	mg/kg	07.13.19 22:41	
Diesel Range Organics (DRO)	<8.10	997	1080	108	1070	107	70-135	1	20	mg/kg	07.13.19 22:41	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	96		97		70-135	%	07.13.19 22:41
o-Terphenyl	110		107		70-135	%	07.13.19 22:41

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3095520 Matrix: Solid Date Prep: 07.13.19
MB Sample Id: 7681948-1-BLK LCS Sample Id: 7681948-1-BKS LCSD Sample Id: 7681948-1-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	0.0815	82	70-130	9	35	mg/kg	07.15.19 09:54	
Toluene	<0.00200	0.100	0.0861	86	0.0948	95	70-130	10	35	mg/kg	07.15.19 09:54	
Ethylbenzene	<0.00200	0.100	0.0853	85	0.0959	96	70-130	12	35	mg/kg	07.15.19 09:54	
m,p-Xylenes	<0.00400	0.200	0.174	87	0.195	98	70-130	11	35	mg/kg	07.15.19 09:54	
o-Xylene	<0.00200	0.100	0.0827	83	0.0923	92	70-130	11	35	mg/kg	07.15.19 09:54	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	92		90		94		70-130	%	07.15.19 09:54
4-Bromofluorobenzene	101		97		103		70-130	%	07.15.19 09:54

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3095520 Matrix: Soil Date Prep: 07.13.19
Parent Sample Id: 630566-039 MS Sample Id: 630566-039 S MSD Sample Id: 630566-039 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.0901	90	0.0759	76	70-130	17	35	mg/kg	07.16.19 11:43	
Toluene	<0.00199	0.0996	0.0861	86	0.0881	88	70-130	2	35	mg/kg	07.16.19 11:43	
Ethylbenzene	<0.00199	0.0996	0.0933	94	0.0821	82	70-130	13	35	mg/kg	07.16.19 11:43	
m,p-Xylenes	<0.00398	0.199	0.189	95	0.165	83	70-130	14	35	mg/kg	07.16.19 11:43	
o-Xylene	0.0716	0.0996	0.0887	17	0.0797	8	70-130	11	35	mg/kg	07.16.19 11:43	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		99		70-130	%	07.16.19 11:43
4-Bromofluorobenzene	114		125		70-130	%	07.16.19 11:43

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	

XENCO LABORATORIES

Chain of Custody

Work Order No: 430592

Page 1 of 1

Project Manager:	Cole Moir	Bill to: (if different)	Kyle Littrell
Company Name:	S.T. Environmental, Inc., Permian Office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM
Phone:	432-704-5178	Email:	[illegible]

Work Order Comments

Program: UST/PST ☐ RRP ☐ Superfund ☐ NC ☐ Brownfield ☐

State of Project:

Reporting Level II ☐ Level III ☐ TRRP ☐ Level IV ☐

Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Pickett Road Fed #001	Turn Around	
Project Number:		Routine ☐	
P.O. Number:		Rush: 3 Day	
Sampler's Name:	Vincent McKoy	Due Date:	

SAMPLE RECEIPT

Temp Blank:	Yes (No)	Wet Ice:	Yes (No)
Temperature (°C):	2.4	Thermometer ID:	T-NM-007
Received Intact:	Yes (No)	Correction Factor:	-0.3
Cooler Custody Seals:	Yes (No) N/A	Total Containers:	4
Sample Custody Seals:	Yes (No) N/A		

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH 8015M (8015)	BTEX 8021B (8021)	Chloride (EPA 300.0)	Sample Comments
[illegible]	S	[illegible]		0.5	1	X	X	X	[illegible]
[illegible]						X	X	X	
[illegible]						X	X	X	
[illegible]						X	X	X	

Work Order Notes

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 SiO2 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 1631 / 245.1 / 7470 / 7471 : Hg

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
[illegible]	[illegible]	7/11/19 1349			

Inter-Office Shipment

IOS Number **43261**

Date/Time: 07/11/19 14:38
Lab# From: **Carlsbad**
Lab# To: **Midland**

Created by: Elizabeth Mcclellan
Delivery Priority:
Air Bill No.: 775692882670

Please send report to: Jessica Kramer
Address: 1089 N Canal Street
E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
630592-001	S	SS01	07/10/19 00:00	E300_CL	Chloride by EPA 300	07/15/19	01/06/20	JKR	CL	
630592-001	S	SS01	07/10/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	07/15/19	07/24/19	JKR	GRO-DRO PHCC10C28 PI	
630592-001	S	SS01	07/10/19 00:00	SW8021B	BTEX by EPA 8021B	07/15/19	07/24/19	JKR	BR4FBZ BZ BZME EBZ X	
630592-002	S	SS02	07/10/19 00:00	SW8021B	BTEX by EPA 8021B	07/15/19	07/24/19	JKR	BR4FBZ BZ BZME EBZ X	
630592-002	S	SS02	07/10/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	07/15/19	07/24/19	JKR	GRO-DRO PHCC10C28 PI	
630592-002	S	SS02	07/10/19 00:00	E300_CL	Chloride by EPA 300	07/15/19	01/06/20	JKR	CL	
630592-003	S	SS03	07/10/19 00:00	SW8021B	BTEX by EPA 8021B	07/15/19	07/24/19	JKR	BR4FBZ BZ BZME EBZ X	
630592-003	S	SS03	07/10/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	07/15/19	07/24/19	JKR	GRO-DRO PHCC10C28 PI	
630592-003	S	SS03	07/10/19 00:00	E300_CL	Chloride by EPA 300	07/15/19	01/06/20	JKR	CL	
630592-004	S	SS04	07/10/19 00:00	SW8021B	BTEX by EPA 8021B	07/15/19	07/24/19	JKR	BR4FBZ BZ BZME EBZ X	
630592-004	S	SS04	07/10/19 00:00	E300_CL	Chloride by EPA 300	07/15/19	01/06/20	JKR	CL	
630592-004	S	SS04	07/10/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	07/15/19	07/24/19	JKR	GRO-DRO PHCC10C28 PI	

Inter Office Shipment or Sample Comments:

Relinquished By: Elizabeth McClellan

Date Relinquished: 07/11/2019

Received By: Brianna Teel

Date Received: 07/12/2019 11:42

Cooler Temperature: 0.4

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 43261

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used : R8

Sent By: Elizabeth McClellan **Date Sent:** 07/11/2019 02:38 PM

Received By: Brianna Teel **Date Received:** 07/12/2019 11:42 AM

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

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

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

Checklist reviewed by: Brianna Teel _____ Date: 07/12/2019
Brianna Teel

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 07/11/2019 12:48:00 PM

Work Order #: 630592

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

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	2.8	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**No**	
#5 Custody Seals intact on sample bottles?	**No**	
#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**	Subbed to Xenco Midland.
#18 Water VOC samples have zero headspace?	**N/A**	

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

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 07/11/2019

Checklist reviewed by: Jessica Kramer Date: 07/12/2019

Analytical Report 633270

for

LT Environmental, Inc.

Project Manager: Dan Moir

Pickett Draw Federal #001

012919150

14-AUG-19

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-29), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142), North Carolina (681)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-19-19), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429), North Carolina (483)

14-AUG-19

Project Manager: **Dan Moir**
LT Environmental, Inc.
4600 W. 60th Avenue
Arvada, CO 80003

Reference: XENCO Report No(s): **633270**
Pickett Draw Federal #001
Project Address: Eddy County

Dan Moir:

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) 633270. 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. 633270 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

Sample Cross Reference 633270

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH01	S	08-02-19 10:50	2 ft	633270-001
PH02	S	08-02-19 11:10	2 ft	633270-002
PH02A	S	08-02-19 11:25	6 ft	633270-003
PH03	S	08-02-19 11:40	2 ft	633270-004
PH04	S	08-02-19 13:20	2 ft	633270-005
PH05	S	08-05-19 10:15	2 ft	633270-006
PH06	S	08-05-19 10:40	2 ft	633270-007
PH07	S	08-05-19 12:55	2 ft	633270-008
PH07A	S	08-05-19 13:00	4 ft	633270-009
PH08	S	08-05-19 13:50	2 ft	633270-010
PH08A	S	08-05-19 14:00	4 ft	633270-011
PH09	S	08-05-19 14:10	2 ft	633270-012
PH09A	S	08-05-19 14:20	4 ft	633270-013

CASE NARRATIVE

Client Name: LT Environmental, Inc.
Project Name: Pickett Draw Federal #001

Project ID: *012919150*
Work Order Number(s): *633270*

Report Date: *14-AUG-19*
Date Received: *08/06/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3098324 BTEX by EPA 8021B
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 633270-005,633270-006.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 633270

LT Environmental, Inc., Arvada, CO

Project Name: Pickett Draw Federal #001

Project Id: 012919150
Contact: Dan Moir
Project Location: Eddy County

Date Received in Lab: Tue Aug-06-19 04:24 pm
Report Date: 14-AUG-19
Project Manager: Jessica Kramer

Analysis Requested	*Lab Id:*	633270-001		633270-002		633270-003		633270-004		633270-005		633270-006	
	Field Id:	PH01		PH02		PH02A		PH03		PH04		PH05	
	Depth:	2- ft		2- ft		6- ft		2- ft		2- ft		2- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Aug-02-19 10:50		Aug-02-19 11:10		Aug-02-19 11:25		Aug-02-19 11:40		Aug-02-19 13:20		Aug-05-19 10:15	
BTEX by EPA 8021B SUB: T104704400-18-16	*Extracted:*	Aug-09-19 11:30		Aug-09-19 11:30		Aug-09-19 11:30		Aug-09-19 11:30		Aug-09-19 11:30		Aug-09-19 11:30	
	Analyzed:	Aug-11-19 16:38		Aug-11-19 16:58		Aug-11-19 17:18		Aug-11-19 17:39		Aug-11-19 17:59		Aug-11-19 18:19	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00199	0.00199	<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200	0.00626	0.00199	0.0863	0.00198
Toluene		<0.00199	0.00199	<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200	0.228	0.00199	7.10 D	0.0495
Ethylbenzene		<0.00199	0.00199	<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200	0.280	0.00199	5.01 D	0.0495
m,p-Xylenes		<0.00398	0.00398	<0.00398	0.00398	<0.00402	0.00402	<0.00400	0.00400	2.16 D	0.0398	7.59	0.00396
o-Xylene		<0.00199	0.00199	<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200	1.89 D	0.0199	7.84 D	0.0495
Total Xylenes		<0.00199	0.00199	<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200	4.05	0.0199	15.4	0.00396
Total BTEX		<0.00199	0.00199	<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200	4.56	0.00199	27.6	0.00198
Chloride by EPA 300 SUB: T104704400-18-16	*Extracted:*	Aug-08-19 14:40		Aug-08-19 15:00		Aug-08-19 15:00		Aug-08-19 15:00		Aug-08-19 15:00		Aug-08-19 15:00	
	Analyzed:	Aug-09-19 11:15		Aug-08-19 17:46		Aug-08-19 18:05		Aug-08-19 18:12		Aug-08-19 18:18		Aug-08-19 18:24	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		875	5.02	140	5.04	15.0	4.96	1550	24.9	511	4.95	123	5.02
TPH by SW8015 Mod SUB: T104704400-18-16	*Extracted:*	Aug-08-19 14:00		Aug-08-19 14:00		Aug-08-19 14:00		Aug-08-19 14:00		Aug-08-19 14:00		Aug-08-19 14:00	
	Analyzed:	Aug-12-19 18:35		Aug-12-19 18:54		Aug-12-19 19:13		Aug-12-19 19:51		Aug-12-19 20:09		Aug-12-19 20:28	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	526	15.0	2150	15.0
Diesel Range Organics (DRO)		<15.0	15.0	27.6	15.0	<15.0	15.0	144	15.0	2630	15.0	4720	15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	19.3	15.0	283	15.0	338	15.0
Total TPH		<15.0	15.0	27.6	15.0	<15.0	15.0	163	15.0	3440	15.0	7210	15.0
Total GRO-DRO		<15.0	15.0	27.6	15.0	<15.0	15.0	144	15.0	3160	15.0	6870	15.0

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Jessica Kramer
Project Assistant

Certificate of Analysis Summary 633270

LT Environmental, Inc., Arvada, CO

Project Name: Pickett Draw Federal #001

Project Id: 012919150
Contact: Dan Moir
Project Location: Eddy County

Date Received in Lab: Tue Aug-06-19 04:24 pm
Report Date: 14-AUG-19
Project Manager: Jessica Kramer

Analysis Requested	*Lab Id:*	633270-007		633270-008		633270-009		633270-010		633270-011		633270-012	
	Field Id:	PH06		PH07		PH07A		PH08		PH08A		PH09	
	Depth:	2- ft		2- ft		4- ft		2- ft		4- ft		2- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Aug-05-19 10:40		Aug-05-19 12:55		Aug-05-19 13:00		Aug-05-19 13:50		Aug-05-19 14:00		Aug-05-19 14:10	
BTEX by EPA 8021B SUB: T104704400-18-16	*Extracted:*	Aug-09-19 11:30		Aug-09-19 11:30		Aug-09-19 11:30		Aug-09-19 11:30		Aug-09-19 11:30		Aug-09-19 11:30	
	Analyzed:	Aug-11-19 18:39		Aug-11-19 18:59		Aug-11-19 19:19		Aug-11-19 19:39		Aug-11-19 20:39		Aug-11-19 20:59	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
Toluene		0.00372	0.00199	0.00315	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
Ethylbenzene		0.00447	0.00199	0.00266	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
m,p-Xylenes		0.00888	0.00398	0.00773	0.00399	<0.00400	0.00400	<0.00398	0.00398	<0.00400	0.00400	<0.00399	0.00399
o-Xylene		0.00655	0.00199	0.00465	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
Total Xylenes		0.0154	0.00199	0.0124	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
Total BTEX		0.0236	0.00199	0.0182	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
Chloride by EPA 300 SUB: T104704400-18-16	*Extracted:*	Aug-08-19 15:00		Aug-08-19 15:00		Aug-08-19 15:00		Aug-08-19 15:00		Aug-08-19 15:00		Aug-08-19 15:00	
	Analyzed:	Aug-08-19 18:43		Aug-08-19 18:50		Aug-08-19 18:56		Aug-08-19 19:02		Aug-08-19 19:09		Aug-08-19 19:15	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		420	5.00	842	4.96	508	5.05	24.4	5.05	56.7	5.05	145	4.98
TPH by SW8015 Mod SUB: T104704400-18-16	*Extracted:*	Aug-08-19 14:00		Aug-08-19 14:00		Aug-08-19 14:00		Aug-08-19 14:00		Aug-08-19 14:00		Aug-08-19 14:00	
	Analyzed:	Aug-12-19 20:47		Aug-12-19 21:06		Aug-12-19 21:25		Aug-12-19 21:44		Aug-12-19 22:02		Aug-12-19 22:21	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		<15.0	15.0	323	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	53.6	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0
Total TPH		<15.0	15.0	377	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0
Total GRO-DRO		<15.0	15.0	323	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0

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Jessica Kramer
Project Assistant

Certificate of Analysis Summary 633270

LT Environmental, Inc., Arvada, CO

Project Name: Pickett Draw Federal #001

Project Id: 012919150
Contact: Dan Moir
Project Location: Eddy County

Date Received in Lab: Tue Aug-06-19 04:24 pm
Report Date: 14-AUG-19
Project Manager: Jessica Kramer

Analysis Requested							
	Lab Id:	633270-013					
	Field Id:	PH09A					
	Depth:	4- ft					
	Matrix:	SOIL					
	Sampled:	Aug-05-19 14:20					
BTEX by EPA 8021B SUB: T104704400-18-16	***Extracted:***	Aug-09-19 11:30					
	Analyzed:	Aug-11-19 21:19					
	Units/RL:	mg/kg RL					
Benzene		<0.00198 0.00198					
Toluene		<0.00198 0.00198					
Ethylbenzene		<0.00198 0.00198					
m,p-Xylenes		<0.00397 0.00397					
o-Xylene		<0.00198 0.00198					
Total Xylenes		<0.00198 0.00198					
Total BTEX		<0.00198 0.00198					
Chloride by EPA 300 SUB: T104704400-18-16	***Extracted:***	Aug-08-19 15:00					
	Analyzed:	Aug-08-19 19:34					
	Units/RL:	mg/kg RL					
Chloride		311 5.00					
TPH by SW8015 Mod SUB: T104704400-18-16	***Extracted:***	Aug-08-19 14:00					
	Analyzed:	Aug-12-19 22:40					
	Units/RL:	mg/kg RL					
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0					
Diesel Range Organics (DRO)		<15.0 15.0					
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0					
Total TPH		<15.0 15.0					
Total GRO-DRO		<15.0 15.0					

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

Jessica Kramer
Project Assistant

Certificate of Analytical Results 633270

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id: **PH01** Matrix: Soil Date Received:08.06.19 16.24
Lab Sample Id: 633270-001 Date Collected: 08.02.19 10.50 Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: CHE % Moisture:
Analyst: CHE Date Prep: 08.08.19 14.40 Basis: Wet Weight
Seq Number: 3098080 SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**875**	5.02	mg/kg	08.09.19 11.15		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: DVM % Moisture:
Analyst: ARM Date Prep: 08.08.19 14.00 Basis: Wet Weight
Seq Number: 3098275 SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.12.19 18.35	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.12.19 18.35	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.12.19 18.35	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.12.19 18.35	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.12.19 18.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	08.12.19 18.35	
o-Terphenyl	84-15-1	94	%	70-135	08.12.19 18.35	

Certificate of Analytical Results 633270

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id: **PH01**
Lab Sample Id: 633270-001

Matrix: Soil
Date Collected: 08.02.19 10.50

Date Received: 08.06.19 16.24
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B
Tech: KTL
Analyst: ALG
Seq Number: 3098324

Date Prep: 08.09.19 11.30

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight
SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.11.19 16.38	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.11.19 16.38	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.11.19 16.38	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.11.19 16.38	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.11.19 16.38	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.11.19 16.38	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.11.19 16.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106	%	70-130	08.11.19 16.38	
4-Bromofluorobenzene	460-00-4	107	%	70-130	08.11.19 16.38	

Certificate of Analytical Results 633270

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id: **PH02** Matrix: Soil Date Received:08.06.19 16.24
Lab Sample Id: 633270-002 Date Collected: 08.02.19 11.10 Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: CHE % Moisture:
Analyst: CHE Date Prep: 08.08.19 15.00 Basis: Wet Weight
Seq Number: 3097992 SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**140**	5.04	mg/kg	08.08.19 17.46		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: DVM % Moisture:
Analyst: ARM Date Prep: 08.08.19 14.00 Basis: Wet Weight
Seq Number: 3098275 SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.12.19 18.54	U	1
Diesel Range Organics (DRO)	C10C28DRO	**27.6**	15.0	mg/kg	08.12.19 18.54		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.12.19 18.54	U	1
Total TPH	PHC635	**27.6**	15.0	mg/kg	08.12.19 18.54		1
Total GRO-DRO	PHC628	**27.6**	15.0	mg/kg	08.12.19 18.54		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	08.12.19 18.54	
o-Terphenyl	84-15-1	98	%	70-135	08.12.19 18.54	

Certificate of Analytical Results 633270

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id: **PH02**
Lab Sample Id: 633270-002

Matrix: Soil
Date Collected: 08.02.19 11.10

Date Received: 08.06.19 16.24
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B
Tech: KTL
Analyst: ALG
Seq Number: 3098324

Date Prep: 08.09.19 11.30

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight
SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.11.19 16.58	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.11.19 16.58	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.11.19 16.58	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.11.19 16.58	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.11.19 16.58	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.11.19 16.58	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.11.19 16.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	114	%	70-130	08.11.19 16.58	
1,4-Difluorobenzene	540-36-3	102	%	70-130	08.11.19 16.58	

Certificate of Analytical Results 633270

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id: **PH02A** Matrix: Soil Date Received:08.06.19 16.24
Lab Sample Id: 633270-003 Date Collected: 08.02.19 11.25 Sample Depth: 6 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: CHE % Moisture:
Analyst: CHE Date Prep: 08.08.19 15.00 Basis: Wet Weight
Seq Number: 3097992 SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**15.0**	4.96	mg/kg	08.08.19 18.05		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: DVM % Moisture:
Analyst: ARM Date Prep: 08.08.19 14.00 Basis: Wet Weight
Seq Number: 3098275 SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.12.19 19.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.12.19 19.13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.12.19 19.13	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.12.19 19.13	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.12.19 19.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	08.12.19 19.13	
o-Terphenyl	84-15-1	92	%	70-135	08.12.19 19.13	

Certificate of Analytical Results 633270

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id: **PH02A**
Lab Sample Id: 633270-003

Matrix: Soil
Date Collected: 08.02.19 11.25

Date Received: 08.06.19 16.24
Sample Depth: 6 ft

Analytical Method: BTEX by EPA 8021B
Tech: KTL
Analyst: ALG
Seq Number: 3098324

Date Prep: 08.09.19 11.30

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight
SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.11.19 17.18	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.11.19 17.18	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.11.19 17.18	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.11.19 17.18	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.11.19 17.18	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.11.19 17.18	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.11.19 17.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	70-130	08.11.19 17.18	
1,4-Difluorobenzene	540-36-3	106	%	70-130	08.11.19 17.18	

Certificate of Analytical Results 633270

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id: **PH03** Matrix: Soil Date Received:08.06.19 16.24
Lab Sample Id: 633270-004 Date Collected: 08.02.19 11.40 Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: CHE % Moisture:
Analyst: CHE Date Prep: 08.08.19 15.00 Basis: Wet Weight
Seq Number: 3097992 SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1550**	24.9	mg/kg	08.08.19 18.12		5

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: DVM % Moisture:
Analyst: ARM Date Prep: 08.08.19 14.00 Basis: Wet Weight
Seq Number: 3098275 SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.12.19 19.51	U	1
Diesel Range Organics (DRO)	C10C28DRO	**144**	15.0	mg/kg	08.12.19 19.51		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**19.3**	15.0	mg/kg	08.12.19 19.51		1
Total TPH	PHC635	**163**	15.0	mg/kg	08.12.19 19.51		1
Total GRO-DRO	PHC628	**144**	15.0	mg/kg	08.12.19 19.51		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	08.12.19 19.51	
o-Terphenyl	84-15-1	96	%	70-135	08.12.19 19.51	

Certificate of Analytical Results 633270

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id: **PH03**
Lab Sample Id: 633270-004

Matrix: Soil
Date Collected: 08.02.19 11.40

Date Received: 08.06.19 16.24
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B
Tech: KTL
Analyst: ALG
Seq Number: 3098324

Date Prep: 08.09.19 11.30

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight
SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.11.19 17.39	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.11.19 17.39	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.11.19 17.39	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	08.11.19 17.39	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.11.19 17.39	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.11.19 17.39	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.11.19 17.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	116	%	70-130	08.11.19 17.39	
1,4-Difluorobenzene	540-36-3	108	%	70-130	08.11.19 17.39	

Certificate of Analytical Results 633270

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id: **PH04** Matrix: Soil Date Received:08.06.19 16.24
Lab Sample Id: 633270-005 Date Collected: 08.02.19 13.20 Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: CHE % Moisture:
Analyst: CHE Date Prep: 08.08.19 15.00 Basis: Wet Weight
Seq Number: 3097992 SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**511**	4.95	mg/kg	08.08.19 18.18		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: DVM % Moisture:
Analyst: ARM Date Prep: 08.08.19 14.00 Basis: Wet Weight
Seq Number: 3098275 SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**526**	15.0	mg/kg	08.12.19 20.09		1
Diesel Range Organics (DRO)	C10C28DRO	**2630**	15.0	mg/kg	08.12.19 20.09		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**283**	15.0	mg/kg	08.12.19 20.09		1
Total TPH	PHC635	**3440**	15.0	mg/kg	08.12.19 20.09		1
Total GRO-DRO	PHC628	**3160**	15.0	mg/kg	08.12.19 20.09		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	121	%	70-135	08.12.19 20.09	
o-Terphenyl	84-15-1	88	%	70-135	08.12.19 20.09	

Certificate of Analytical Results 633270

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id:	**PH04**	Matrix:	Soil	Date Received:	08.06.19 16.24
Lab Sample Id:	633270-005	Date Collected:	08.02.19 13.20	Sample Depth:	2 ft

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	ALG	Date Prep:	08.09.19 11.30	Basis:	Wet Weight
Seq Number:	3098324			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.00626**	0.00199	mg/kg	08.11.19 17.59		1
Toluene	108-88-3	**0.228**	0.00199	mg/kg	08.11.19 17.59		1
Ethylbenzene	100-41-4	**0.280**	0.00199	mg/kg	08.11.19 17.59		1
m,p-Xylenes	179601-23-1	**2.16**	0.0398	mg/kg	08.13.19 20.14	D	10
o-Xylene	95-47-6	**1.89**	0.0199	mg/kg	08.13.19 20.14	D	10
Total Xylenes	1330-20-7	**4.05**	0.0199	mg/kg	08.13.19 20.14		10
Total BTEX		**4.56**	0.00199	mg/kg	08.13.19 20.14		10

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	188	%	70-130	08.11.19 17.59	**
1,4-Difluorobenzene	540-36-3	121	%	70-130	08.11.19 17.59	

Certificate of Analytical Results 633270

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id: **PH05** Matrix: Soil Date Received:08.06.19 16.24
Lab Sample Id: 633270-006 Date Collected: 08.05.19 10.15 Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: CHE % Moisture:
Analyst: CHE Date Prep: 08.08.19 15.00 Basis: Wet Weight
Seq Number: 3097992 SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**123**	5.02	mg/kg	08.08.19 18.24		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: DVM % Moisture:
Analyst: ARM Date Prep: 08.08.19 14.00 Basis: Wet Weight
Seq Number: 3098275 SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**2150**	15.0	mg/kg	08.12.19 20.28		1
Diesel Range Organics (DRO)	C10C28DRO	**4720**	15.0	mg/kg	08.12.19 20.28		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**338**	15.0	mg/kg	08.12.19 20.28		1
Total TPH	PHC635	**7210**	15.0	mg/kg	08.12.19 20.28		1
Total GRO-DRO	PHC628	**6870**	15.0	mg/kg	08.12.19 20.28		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	08.12.19 20.28	
o-Terphenyl	84-15-1	112	%	70-135	08.12.19 20.28	

Certificate of Analytical Results 633270

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id: **PH05**
Lab Sample Id: 633270-006

Matrix: Soil
Date Collected: 08.05.19 10.15

Date Received: 08.06.19 16.24
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B
Tech: KTL
Analyst: ALG
Seq Number: 3098324

Date Prep: 08.09.19 11.30

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight
SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.0863**	0.00198	mg/kg	08.11.19 18.19		1
Toluene	108-88-3	**7.10**	0.0495	mg/kg	08.13.19 20.35	D	25
Ethylbenzene	100-41-4	**5.01**	0.0495	mg/kg	08.13.19 20.35	D	25
m,p-Xylenes	179601-23-1	**7.59**	0.00396	mg/kg	08.11.19 18.19		1
o-Xylene	95-47-6	**7.84**	0.0495	mg/kg	08.13.19 20.35	D	25
Total Xylenes	1330-20-7	**15.4**	0.00396	mg/kg	08.13.19 20.35		25
Total BTEX		**27.6**	0.00198	mg/kg	08.13.19 20.35		25

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	1400	%	70-130	08.11.19 18.19	**
1,4-Difluorobenzene	540-36-3	83	%	70-130	08.11.19 18.19	

Certificate of Analytical Results 633270

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id:	**PH06**	Matrix:	Soil	Date Received:	08.06.19 16.24
Lab Sample Id:	633270-007	Date Collected:	08.05.19 10.40	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.08.19 15.00	Basis:	Wet Weight
Seq Number:	3097992			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**420**	5.00	mg/kg	08.08.19 18.43		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.08.19 14.00	Basis:	Wet Weight
Seq Number:	3098275			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.12.19 20.47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.12.19 20.47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.12.19 20.47	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.12.19 20.47	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.12.19 20.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	08.12.19 20.47	
o-Terphenyl	84-15-1	95	%	70-135	08.12.19 20.47	

Certificate of Analytical Results 633270

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id: **PH06**
Lab Sample Id: 633270-007

Matrix: Soil
Date Collected: 08.05.19 10.40

Date Received: 08.06.19 16.24
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B
Tech: KTL
Analyst: ALG
Seq Number: 3098324

Date Prep: 08.09.19 11.30

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight
SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.11.19 18.39	U	1
Toluene	108-88-3	**0.00372**	0.00199	mg/kg	08.11.19 18.39		1
Ethylbenzene	100-41-4	**0.00447**	0.00199	mg/kg	08.11.19 18.39		1
m,p-Xylenes	179601-23-1	**0.00888**	0.00398	mg/kg	08.11.19 18.39		1
o-Xylene	95-47-6	**0.00655**	0.00199	mg/kg	08.11.19 18.39		1
Total Xylenes	1330-20-7	**0.0154**	0.00199	mg/kg	08.11.19 18.39		1
Total BTEX		**0.0236**	0.00199	mg/kg	08.11.19 18.39		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	08.11.19 18.39	
4-Bromofluorobenzene	460-00-4	108	%	70-130	08.11.19 18.39	

Certificate of Analytical Results 633270

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id: **PH07** Matrix: Soil Date Received:08.06.19 16.24
Lab Sample Id: 633270-008 Date Collected: 08.05.19 12.55 Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: CHE % Moisture:
Analyst: CHE Date Prep: 08.08.19 15.00 Basis: Wet Weight
Seq Number: 3097992 SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**842**	4.96	mg/kg	08.08.19 18.50		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: DVM % Moisture:
Analyst: ARM Date Prep: 08.08.19 14.00 Basis: Wet Weight
Seq Number: 3098275 SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.12.19 21.06	U	1
Diesel Range Organics (DRO)	C10C28DRO	**323**	15.0	mg/kg	08.12.19 21.06		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**53.6**	15.0	mg/kg	08.12.19 21.06		1
Total TPH	PHC635	**377**	15.0	mg/kg	08.12.19 21.06		1
Total GRO-DRO	PHC628	**323**	15.0	mg/kg	08.12.19 21.06		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	08.12.19 21.06	
o-Terphenyl	84-15-1	95	%	70-135	08.12.19 21.06	

Certificate of Analytical Results 633270

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id:	**PH07**	Matrix:	Soil	Date Received:	08.06.19 16.24
Lab Sample Id:	633270-008	Date Collected:	08.05.19 12.55	Sample Depth:	2 ft

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	ALG	Date Prep:	08.09.19 11.30	Basis:	Wet Weight
Seq Number:	3098324			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.11.19 18.59	U	1
Toluene	108-88-3	**0.00315**	0.00200	mg/kg	08.11.19 18.59		1
Ethylbenzene	100-41-4	**0.00266**	0.00200	mg/kg	08.11.19 18.59		1
m,p-Xylenes	179601-23-1	**0.00773**	0.00399	mg/kg	08.11.19 18.59		1
o-Xylene	95-47-6	**0.00465**	0.00200	mg/kg	08.11.19 18.59		1
Total Xylenes	1330-20-7	**0.0124**	0.00200	mg/kg	08.11.19 18.59		1
Total BTEX		**0.0182**	0.00200	mg/kg	08.11.19 18.59		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106	%	70-130	08.11.19 18.59	
4-Bromofluorobenzene	460-00-4	108	%	70-130	08.11.19 18.59	

Certificate of Analytical Results 633270

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id: **PH07A** Matrix: Soil Date Received:08.06.19 16.24
Lab Sample Id: 633270-009 Date Collected: 08.05.19 13.00 Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: CHE % Moisture:
Analyst: CHE Date Prep: 08.08.19 15.00 Basis: Wet Weight
Seq Number: 3097992 SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**508**	5.05	mg/kg	08.08.19 18.56		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: DVM % Moisture:
Analyst: ARM Date Prep: 08.08.19 14.00 Basis: Wet Weight
Seq Number: 3098275 SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.12.19 21.25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.12.19 21.25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.12.19 21.25	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.12.19 21.25	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.12.19 21.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	08.12.19 21.25	
o-Terphenyl	84-15-1	92	%	70-135	08.12.19 21.25	

Certificate of Analytical Results 633270

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id: **PH07A**
Lab Sample Id: 633270-009

Matrix: Soil
Date Collected: 08.05.19 13.00

Date Received: 08.06.19 16.24
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B
Tech: KTL
Analyst: ALG
Seq Number: 3098324

Date Prep: 08.09.19 11.30

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight
SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.11.19 19.19	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.11.19 19.19	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.11.19 19.19	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	08.11.19 19.19	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.11.19 19.19	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.11.19 19.19	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.11.19 19.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	108	%	70-130	08.11.19 19.19	
1,4-Difluorobenzene	540-36-3	106	%	70-130	08.11.19 19.19	

Certificate of Analytical Results 633270

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id: **PH08** Matrix: Soil Date Received:08.06.19 16.24
Lab Sample Id: 633270-010 Date Collected: 08.05.19 13.50 Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: CHE % Moisture:
Analyst: CHE Date Prep: 08.08.19 15.00 Basis: Wet Weight
Seq Number: 3097992 SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**24.4**	5.05	mg/kg	08.08.19 19.02		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: DVM % Moisture:
Analyst: ARM Date Prep: 08.08.19 14.00 Basis: Wet Weight
Seq Number: 3098275 SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	08.12.19 21.44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	08.12.19 21.44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	08.12.19 21.44	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	08.12.19 21.44	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	08.12.19 21.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	08.12.19 21.44	
o-Terphenyl	84-15-1	87	%	70-135	08.12.19 21.44	

Certificate of Analytical Results 633270

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id: **PH08**
Lab Sample Id: 633270-010

Matrix: Soil
Date Collected: 08.05.19 13.50

Date Received: 08.06.19 16.24
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B
Tech: KTL
Analyst: ALG
Seq Number: 3098324

Date Prep: 08.09.19 11.30

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight
SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.11.19 19.39	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.11.19 19.39	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.11.19 19.39	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.11.19 19.39	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.11.19 19.39	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.11.19 19.39	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.11.19 19.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	108	%	70-130	08.11.19 19.39	
4-Bromofluorobenzene	460-00-4	110	%	70-130	08.11.19 19.39	

Certificate of Analytical Results 633270

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id: **PH08A** Matrix: Soil Date Received:08.06.19 16.24
Lab Sample Id: 633270-011 Date Collected: 08.05.19 14.00 Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: CHE % Moisture:
Analyst: CHE Date Prep: 08.08.19 15.00 Basis: Wet Weight
Seq Number: 3097992 SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**56.7**	5.05	mg/kg	08.08.19 19.09		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: DVM % Moisture:
Analyst: ARM Date Prep: 08.08.19 14.00 Basis: Wet Weight
Seq Number: 3098275 SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.12.19 22.02	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.12.19 22.02	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.12.19 22.02	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.12.19 22.02	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.12.19 22.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	08.12.19 22.02	
o-Terphenyl	84-15-1	91	%	70-135	08.12.19 22.02	

Certificate of Analytical Results 633270

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id: **PH08A**
Lab Sample Id: 633270-011

Matrix: Soil
Date Collected: 08.05.19 14.00

Date Received: 08.06.19 16.24
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B
Tech: KTL
Analyst: ALG
Seq Number: 3098324

Date Prep: 08.09.19 11.30

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight
SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.11.19 20.39	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.11.19 20.39	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.11.19 20.39	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	08.11.19 20.39	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.11.19 20.39	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.11.19 20.39	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.11.19 20.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	70-130	08.11.19 20.39	
1,4-Difluorobenzene	540-36-3	106	%	70-130	08.11.19 20.39	

Certificate of Analytical Results 633270

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id: **PH09** Matrix: Soil Date Received:08.06.19 16.24
Lab Sample Id: 633270-012 Date Collected: 08.05.19 14.10 Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: CHE % Moisture:
Analyst: CHE Date Prep: 08.08.19 15.00 Basis: Wet Weight
Seq Number: 3097992 SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**145**	4.98	mg/kg	08.08.19 19.15		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: DVM % Moisture:
Analyst: ARM Date Prep: 08.08.19 14.00 Basis: Wet Weight
Seq Number: 3098275 SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.12.19 22.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.12.19 22.21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.12.19 22.21	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.12.19 22.21	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.12.19 22.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	08.12.19 22.21	
o-Terphenyl	84-15-1	90	%	70-135	08.12.19 22.21	

Certificate of Analytical Results 633270

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id: **PH09**
Lab Sample Id: 633270-012

Matrix: Soil
Date Collected: 08.05.19 14.10

Date Received: 08.06.19 16.24
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B
Tech: KTL
Analyst: ALG
Seq Number: 3098324

Date Prep: 08.09.19 11.30

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight
SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.11.19 20.59	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.11.19 20.59	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.11.19 20.59	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.11.19 20.59	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.11.19 20.59	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.11.19 20.59	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.11.19 20.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	107	%	70-130	08.11.19 20.59	
4-Bromofluorobenzene	460-00-4	102	%	70-130	08.11.19 20.59	

Certificate of Analytical Results 633270

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id: **PH09A** Matrix: Soil Date Received:08.06.19 16.24
Lab Sample Id: 633270-013 Date Collected: 08.05.19 14.20 Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: CHE % Moisture:
Analyst: CHE Date Prep: 08.08.19 15.00 Basis: Wet Weight
Seq Number: 3097992 SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**311**	5.00	mg/kg	08.08.19 19.34		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: DVM % Moisture:
Analyst: ARM Date Prep: 08.08.19 14.00 Basis: Wet Weight
Seq Number: 3098275 SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.12.19 22.40	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.12.19 22.40	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.12.19 22.40	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.12.19 22.40	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.12.19 22.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	08.12.19 22.40	
o-Terphenyl	84-15-1	90	%	70-135	08.12.19 22.40	

Certificate of Analytical Results 633270

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id: **PH09A**
Lab Sample Id: 633270-013

Matrix: Soil
Date Collected: 08.05.19 14.20

Date Received: 08.06.19 16.24
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B
Tech: KTL
Analyst: ALG
Seq Number: 3098324

Date Prep: 08.09.19 11.30

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight
SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.11.19 21.19	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.11.19 21.19	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.11.19 21.19	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	08.11.19 21.19	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.11.19 21.19	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.11.19 21.19	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.11.19 21.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	88	%	70-130	08.11.19 21.19	
4-Bromofluorobenzene	460-00-4	105	%	70-130	08.11.19 21.19	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 633270

LT Environmental, Inc.

Pickett Draw Federal #001

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3098080 Matrix: Solid Date Prep: 08.08.19
MB Sample Id: 7683802-1-BLK LCS Sample Id: 7683802-1-BKS LCSD Sample Id: 7683802-1-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	261	104	261	104	90-110	0	20	mg/kg	08.09.19 08:12	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3097992 Matrix: Solid Date Prep: 08.08.19
MB Sample Id: 7683833-1-BLK LCS Sample Id: 7683833-1-BKS LCSD Sample Id: 7683833-1-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	252	101	251	100	90-110	0	20	mg/kg	08.08.19 17:34	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3098080 Matrix: Soil Date Prep: 08.08.19
Parent Sample Id: 633244-003 MS Sample Id: 633244-003 S MSD Sample Id: 633244-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	10.2	250	267	103	267	103	90-110	0	20	mg/kg	08.09.19 09:59	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3098080 Matrix: Sludge Date Prep: 08.08.19
Parent Sample Id: 633426-001 MS Sample Id: 633426-001 S MSD Sample Id: 633426-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	198	253	456	102	456	102	90-110	0	20	mg/kg	08.09.19 08:31	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3097992 Matrix: Soil Date Prep: 08.08.19
Parent Sample Id: 633270-002 MS Sample Id: 633270-002 S MSD Sample Id: 633270-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	140	252	395	101	395	101	90-110	0	20	mg/kg	08.08.19 17:53	

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 633270

LT Environmental, Inc.

Pickett Draw Federal #001

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3097992 Matrix: Soil Date Prep: 08.08.19
Parent Sample Id: 633270-012 MS Sample Id: 633270-012 S MSD Sample Id: 633270-012 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	145	249	404	104	403	104	90-110	0	20	mg/kg	08.08.19 19:21	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3098275 Matrix: Solid Date Prep: 08.08.19
MB Sample Id: 7683831-1-BLK LCS Sample Id: 7683831-1-BKS LCSD Sample Id: 7683831-1-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)	<8.00	1000	989	99	1020	102	70-135	3	20	mg/kg	08.12.19 15:04	
Diesel Range Organics (DRO)	<8.13	1000	985	99	963	96	70-135	2	20	mg/kg	08.12.19 15:04	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	97		114		114		70-135	%	08.12.19 15:04
o-Terphenyl	98		99		99		70-135	%	08.12.19 15:04

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3098275 Matrix: Soil Date Prep: 08.08.19
Parent Sample Id: 633262-001 MS Sample Id: 633262-001 S MSD Sample Id: 633262-001 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)	<7.98	997	1100	110	1160	116	70-135	5	20	mg/kg	08.12.19 16:01	
Diesel Range Organics (DRO)	48.3	997	1130	108	1130	109	70-135	0	20	mg/kg	08.12.19 16:01	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	120		122		70-135	%	08.12.19 16:01
o-Terphenyl	100		104		70-135	%	08.12.19 16:01

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 633270

LT Environmental, Inc.

Pickett Draw Federal #001

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3098324 Matrix: Solid Date Prep: 08.09.19
MB Sample Id: 7683899-1-BLK LCS Sample Id: 7683899-1-BKS LCSD Sample Id: 7683899-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000385	0.100	0.103	103	0.0882	88	70-130	15	35	mg/kg	08.11.19 14:38	
Toluene	<0.000456	0.100	0.0904	90	0.0799	80	70-130	12	35	mg/kg	08.11.19 14:38	
Ethylbenzene	<0.00200	0.100	0.0875	88	0.0781	78	70-130	11	35	mg/kg	08.11.19 14:38	
m,p-Xylenes	<0.00101	0.200	0.172	86	0.155	78	70-130	10	35	mg/kg	08.11.19 14:38	
o-Xylene	<0.000344	0.100	0.0907	91	0.0826	83	70-130	9	35	mg/kg	08.11.19 14:38	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		102		103		70-130	%	08.11.19 14:38
4-Bromofluorobenzene	99		99		104		70-130	%	08.11.19 14:38

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3098324 Matrix: Soil Date Prep: 08.09.19
Parent Sample Id: 633270-001 MS Sample Id: 633270-001 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Benzene	<0.00198	0.0992	0.0933	94	70-130	mg/kg	08.11.19 15:19	
Toluene	0.000538	0.0992	0.0813	81	70-130	mg/kg	08.11.19 15:19	
Ethylbenzene	<0.00198	0.0992	0.0771	78	70-130	mg/kg	08.11.19 15:19	
m,p-Xylenes	<0.00101	0.198	0.147	74	70-130	mg/kg	08.11.19 15:19	
o-Xylene	0.000349	0.0992	0.0844	85	70-130	mg/kg	08.11.19 15:19	

Surrogate	MS %Rec	MS Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		70-130	%	08.11.19 15:19
4-Bromofluorobenzene	115		70-130	%	08.11.19 15:19

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	

Chain of Custody

XENCO LABORATORIES

Work Order No: 1032270

Page 1 of 2

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc. - Permian Office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	
Phone:	(432) 706-3940	Email:	

Work Order Comments

Programs: UST/PST ☐ PRP ☐ Brownfields ☐ RC ☐ Superfund ☐

State of Project:

Reporting Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐

Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Pickett Draw Federal #001	Turn Around	
Project Number:	22018150	Routine: ☒	
P.O. Number:	Eddy County	Rush:	
Sampler's Name:	Lynda Laumbach	Due Date:	

SAMPLE RECEIPT

Temp Blank:	Yes / No	Wet Ice:	Yes / No
Thermometer ID:		Thermometer ID:	
Received Intact:	Yes / No	T= N.A. - 0.2	
Cooler Custody Seals:	Yes / No / N/A	Correction Factor:	- 0.2
Sample Custody Seals:	Yes / No / N/A	Total Containers:	3

ANALYSIS REQUEST

Work Order Notes

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	BTEX 8260B-MRB	Chloride (EPA 300.0)	Sample Comments
Pile 1	S	08/24/23	10:10	2'	1	X	X	
Pile 2	S		10:10	2'	1			
Pile 3	S		10:35	2'	1			
Pile 4	S		10:40	2'	1			
Pile 5	S		10:20	2'	1			
Pile 6	S	08/24/23	10:15	2'	1			
Pile 7	S		10:40	2'	1			
Pile 7A	S		10:55	2'	1			
Pile 8	S		11:00	2'	1			
Pile 8	S		11:20	2'	1			

Total: 360.1 / 9056 300.0 / 9056: BACRA CRNM Total 11: Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
	Renee Byers	8/24/2023	Renee Byers		8/24/23 14:18

Chain of Custody

XENCO Laboratories

Work Order No: 433270

Page 2 of 2

Project Manager:	Dan Moir	Bill to (if different):	Kelly Lemon
Company Name:	A.T. Environmental, Inc. - Midland office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	
Phone:	432) 706-0840	Email:	

Work Order Comments

Programs: 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:	Pickett Draw Federal #002	Turn Around	
Project Number:	12916150	Routine	X
P.O. Number:	Eddy County	Rush:	
Sampler's Name:	Jordan Leatherbeck	Due Date:	

ANALYSIS REQUEST

Work Order Notes

SAMPLE RECEIPT	Temp Blank	Yes No	Wet Ice	Yes No
Temperature (°C):	4.2		Thermometer ID:	
Received Intact:	Yes No		Cooler Custody Seals:	Yes No N/A
Cooler Custody Seals:	Yes No and/or		Correction Factor:	0.0
Sample Custody Seals:	Yes No N/A		Total Containers:	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Total # of Containers	BTEX 8021B/8260	TPH 8015M/8015D GRO	Chlorides 300.0/9056
PB-SS	S	08/16/24	11:00	0'	1	X	X	X
PB-2	S		11:10	2'	1	X	X	X
PB-4	S		11:20	4'	1	X	X	X

Sample Comments

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 SiO2 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 1631 / 245.1 / 7470 / 7471 Hg

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
	Dawn Byers	8/16/24 @ 1400	Dawn Byers	[illegible]	8/16/24 @ 1400

Inter-Office Shipment

IOS Number **45749**

Date/Time: 08/07/19 11:19
Lab# From: **Carlsbad**
Lab# To: **Midland**

Created by: Elizabeth Mcclellan
Delivery Priority:
Air Bill No.: 7759305855567

Please send report to: Jessica Kramer
Address: 1089 N Canal Street
E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
633270-001	S	PH01	08/02/19 10:50	SW8021B	BTEX by EPA 8021B	08/12/19	08/16/19	JKR	BR4FBZ BZ BZME EBZ X	
633270-001	S	PH01	08/02/19 10:50	E300_CL	Chloride by EPA 300	08/12/19	01/29/20	JKR	CL	
633270-001	S	PH01	08/02/19 10:50	SW8015MOD_NM	TPH by SW8015 Mod	08/12/19	08/16/19	JKR	GRO-DRO PHCC10C28 PH	
633270-002	S	PH02	08/02/19 11:10	E300_CL	Chloride by EPA 300	08/12/19	01/29/20	JKR	CL	
633270-002	S	PH02	08/02/19 11:10	SW8015MOD_NM	TPH by SW8015 Mod	08/12/19	08/16/19	JKR	GRO-DRO PHCC10C28 PH	
633270-002	S	PH02	08/02/19 11:10	SW8021B	BTEX by EPA 8021B	08/12/19	08/16/19	JKR	BR4FBZ BZ BZME EBZ X	
633270-003	S	PH02A	08/02/19 11:25	E300_CL	Chloride by EPA 300	08/12/19	01/29/20	JKR	CL	
633270-003	S	PH02A	08/02/19 11:25	SW8015MOD_NM	TPH by SW8015 Mod	08/12/19	08/16/19	JKR	GRO-DRO PHCC10C28 PH	
633270-003	S	PH02A	08/02/19 11:25	SW8021B	BTEX by EPA 8021B	08/12/19	08/16/19	JKR	BR4FBZ BZ BZME EBZ X	
633270-004	S	PH03	08/02/19 11:40	E300_CL	Chloride by EPA 300	08/12/19	01/29/20	JKR	CL	
633270-004	S	PH03	08/02/19 11:40	SW8015MOD_NM	TPH by SW8015 Mod	08/12/19	08/16/19	JKR	GRO-DRO PHCC10C28 PH	
633270-004	S	PH03	08/02/19 11:40	SW8021B	BTEX by EPA 8021B	08/12/19	08/16/19	JKR	BR4FBZ BZ BZME EBZ X	
633270-005	S	PH04	08/02/19 13:20	SW8015MOD_NM	TPH by SW8015 Mod	08/12/19	08/16/19	JKR	GRO-DRO PHCC10C28 PH	
633270-005	S	PH04	08/02/19 13:20	SW8021B	BTEX by EPA 8021B	08/12/19	08/16/19	JKR	BR4FBZ BZ BZME EBZ X	
633270-005	S	PH04	08/02/19 13:20	E300_CL	Chloride by EPA 300	08/12/19	01/29/20	JKR	CL	
633270-006	S	PH05	08/05/19 10:15	E300_CL	Chloride by EPA 300	08/12/19	02/01/20	JKR	CL	
633270-006	S	PH05	08/05/19 10:15	SW8015MOD_NM	TPH by SW8015 Mod	08/12/19	08/19/19	JKR	GRO-DRO PHCC10C28 PH	
633270-006	S	PH05	08/05/19 10:15	SW8021B	BTEX by EPA 8021B	08/12/19	08/19/19	JKR	BR4FBZ BZ BZME EBZ X	
633270-007	S	PH06	08/05/19 10:40	SW8015MOD_NM	TPH by SW8015 Mod	08/12/19	08/19/19	JKR	GRO-DRO PHCC10C28 PH	
633270-007	S	PH06	08/05/19 10:40	SW8021B	BTEX by EPA 8021B	08/12/19	08/19/19	JKR	BR4FBZ BZ BZME EBZ X	
633270-007	S	PH06	08/05/19 10:40	E300_CL	Chloride by EPA 300	08/12/19	02/01/20	JKR	CL	
633270-008	S	PH07	08/05/19 12:55	E300_CL	Chloride by EPA 300	08/12/19	02/01/20	JKR	CL	
633270-008	S	PH07	08/05/19 12:55	SW8021B	BTEX by EPA 8021B	08/12/19	08/19/19	JKR	BR4FBZ BZ BZME EBZ X	
633270-008	S	PH07	08/05/19 12:55	SW8015MOD_NM	TPH by SW8015 Mod	08/12/19	08/19/19	JKR	GRO-DRO PHCC10C28 PH	
633270-009	S	PH07A	08/05/19 13:00	SW8021B	BTEX by EPA 8021B	08/12/19	08/19/19	JKR	BR4FBZ BZ BZME EBZ X	

Inter-Office Shipment

IOS Number **45749**

Date/Time: 08/07/19 11:19
Lab# From: **Carlsbad**
Lab# To: **Midland**

Created by: Elizabeth Mcclellan
Delivery Priority:
Air Bill No.: 7759305855567

Please send report to: Jessica Kramer
Address: 1089 N Canal Street
E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
633270-009	S	PH07A	08/05/19 13:00	E300_CL	Chloride by EPA 300	08/12/19	02/01/20	JKR	CL	
633270-009	S	PH07A	08/05/19 13:00	SW8015MOD_NM	TPH by SW8015 Mod	08/12/19	08/19/19	JKR	GRO-DRO PHCC10C28 PI	
633270-010	S	PH08	08/05/19 13:50	E300_CL	Chloride by EPA 300	08/12/19	02/01/20	JKR	CL	
633270-010	S	PH08	08/05/19 13:50	SW8021B	BTEX by EPA 8021B	08/12/19	08/19/19	JKR	BR4FBZ BZ BZME EBZ X	
633270-010	S	PH08	08/05/19 13:50	SW8015MOD_NM	TPH by SW8015 Mod	08/12/19	08/19/19	JKR	GRO-DRO PHCC10C28 PI	
633270-011	S	PH08A	08/05/19 14:00	SW8021B	BTEX by EPA 8021B	08/12/19	08/19/19	JKR	BR4FBZ BZ BZME EBZ X	
633270-011	S	PH08A	08/05/19 14:00	SW8015MOD_NM	TPH by SW8015 Mod	08/12/19	08/19/19	JKR	GRO-DRO PHCC10C28 PI	
633270-011	S	PH08A	08/05/19 14:00	E300_CL	Chloride by EPA 300	08/12/19	02/01/20	JKR	CL	
633270-012	S	PH09	08/05/19 14:10	SW8021B	BTEX by EPA 8021B	08/12/19	08/19/19	JKR	BR4FBZ BZ BZME EBZ X	
633270-012	S	PH09	08/05/19 14:10	SW8015MOD_NM	TPH by SW8015 Mod	08/12/19	08/19/19	JKR	GRO-DRO PHCC10C28 PI	
633270-012	S	PH09	08/05/19 14:10	E300_CL	Chloride by EPA 300	08/12/19	02/01/20	JKR	CL	
633270-013	S	PH09A	08/05/19 14:20	E300_CL	Chloride by EPA 300	08/12/19	02/01/20	JKR	CL	
633270-013	S	PH09A	08/05/19 14:20	SW8021B	BTEX by EPA 8021B	08/12/19	08/19/19	JKR	BR4FBZ BZ BZME EBZ X	
633270-013	S	PH09A	08/05/19 14:20	SW8015MOD_NM	TPH by SW8015 Mod	08/12/19	08/19/19	JKR	GRO-DRO PHCC10C28 PI	

Inter Office Shipment or Sample Comments:

Relinquished By: Elizabeth McClellan

Date Relinquished: 08/07/2019

Received By: Brianna Teel

Date Received: 08/08/2019 11:05

Cooler Temperature: 0.5

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 45749

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used : R8

Sent By: Elizabeth McClellan **Date Sent:** 08/07/2019 11:19 AM

Received By: Brianna Teel **Date Received:** 08/08/2019 11:05 AM

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

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

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

Checklist reviewed by: Brianna Teel
Brianna Teel

Date: 08/08/2019

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 08/06/2019 04:24:00 PM

Work Order #: 633270

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

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	4.2	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**No**	
#5 Custody Seals intact on sample bottles?	**No**	
#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**	Subbed to Xenco Midland.
#18 Water VOC samples have zero headspace?	**N/A**	

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

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 08/07/2019

Checklist reviewed by: Kalei Stout Date: 08/08/2019

Analytical Report 633408

for

LT Environmental, Inc.

Project Manager: Dan Moir

Pickett Draw Federal #001

12919150

12-AUG-19

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-29), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142), North Carolina (681)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-19-19), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429), North Carolina (483)

12-AUG-19

Project Manager: **Dan Moir**
LT Environmental, Inc.
4600 W. 60th Avenue
Arvada, CO 80003

Reference: XENCO Report No(s): **633408**
Pickett Draw Federal #001
Project Address: Eddy County

Dan Moir:

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) 633408. 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. 633408 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

Sample Cross Reference 633408

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH03A	S	08-02-19 13:00	20 ft	633408-001
PH04A	S	08-05-19 09:55	20 ft	633408-002
PH05A	S	08-05-19 10:25	14 ft	633408-003
PH06A	S	08-05-19 12:00	16 ft	633408-004

CASE NARRATIVE

Client Name: LT Environmental, Inc.
Project Name: Pickett Draw Federal #001

Project ID: *12919150*
Work Order Number(s): *633408*

Report Date: *12-AUG-19*
Date Received: *08/08/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3098269 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 633408

LT Environmental, Inc., Arvada, CO

Project Name: Pickett Draw Federal #001

Project Id: 12919150
Contact: Dan Moir
Project Location: Eddy County

Date Received in Lab: Thu Aug-08-19 11:05 am
Report Date: 12-AUG-19
Project Manager: Jessica Kramer

Analysis Requested	*Lab Id:*	633408-001		633408-002		633408-003		633408-004			
	Field Id:	PH03A		PH04A		PH05A		PH06A			
	Depth:	20- ft		20- ft		14- ft		16- ft			
	Matrix:	SOIL		SOIL		SOIL		SOIL			
	Sampled:	Aug-02-19 13:00		Aug-05-19 09:55		Aug-05-19 10:25		Aug-05-19 12:00			
BTEX by EPA 8021B	*Extracted:*	Aug-08-19 15:16		Aug-08-19 15:16		Aug-08-19 15:16		Aug-08-19 15:16			
	Analyzed:	Aug-10-19 11:42		Aug-10-19 12:03		Aug-10-19 12:23		Aug-10-19 12:43			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Benzene		<0.00198	0.00198	<0.00198	0.00198	<0.00200	0.00200	<0.00199	0.00199		
Toluene		<0.00198	0.00198	<0.00198	0.00198	<0.00200	0.00200	<0.00199	0.00199		
Ethylbenzene		<0.00198	0.00198	<0.00198	0.00198	<0.00200	0.00200	<0.00199	0.00199		
m,p-Xylenes		<0.00397	0.00397	<0.00396	0.00396	<0.00399	0.00399	<0.00398	0.00398		
o-Xylene		<0.00198	0.00198	<0.00198	0.00198	<0.00200	0.00200	<0.00199	0.00199		
Total Xylenes		<0.00198	0.00198	<0.00198	0.00198	<0.00200	0.00200	<0.00199	0.00199		
Total BTEX		<0.00198	0.00198	<0.00198	0.00198	<0.00200	0.00200	<0.00199	0.00199		
Chloride by EPA 300	*Extracted:*	Aug-08-19 13:30		Aug-08-19 13:30		Aug-08-19 13:30		Aug-08-19 13:30			
	Analyzed:	Aug-08-19 14:09		Aug-08-19 15:19		Aug-08-19 15:25		Aug-08-19 15:31			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Chloride		16.4	5.00	1750	24.8	813	5.00	5430	50.2		
TPH by SW8015 Mod	*Extracted:*	Aug-09-19 15:00		Aug-09-19 15:00		Aug-09-19 15:00		Aug-09-19 15:00			
	Analyzed:	Aug-11-19 04:55		Aug-11-19 05:14		Aug-11-19 05:33		Aug-11-19 05:51			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	16.7	14.9	<15.0	15.0		
Diesel Range Organics (DRO)		42.4	15.0	<15.0	15.0	340	14.9	<15.0	15.0		
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	39.5	14.9	<15.0	15.0		
Total TPH		42.4	15.0	<15.0	15.0	396	14.9	<15.0	15.0		
Total GRO-DRO		42.4	15.0	<15.0	15.0	357	14.9	<15.0	15.0		

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

Jessica Kramer
Project Assistant

Certificate of Analytical Results 633408

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id: **PH03A** Matrix: Soil Date Received: 08.08.19 11.05
Lab Sample Id: 633408-001 Date Collected: 08.02.19 13.00 Sample Depth: 20 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: CHE % Moisture:
Analyst: CHE Date Prep: 08.08.19 13.30 Basis: Wet Weight
Seq Number: 3097977

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**16.4**	5.00	mg/kg	08.08.19 14.09		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: DVM % Moisture:
Analyst: ARM Date Prep: 08.09.19 15.00 Basis: Wet Weight
Seq Number: 3098133

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.11.19 04.55	U	1
Diesel Range Organics (DRO)	C10C28DRO	**42.4**	15.0	mg/kg	08.11.19 04.55		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.11.19 04.55	U	1
Total TPH	PHC635	**42.4**	15.0	mg/kg	08.11.19 04.55		1
Total GRO-DRO	PHC628	**42.4**	15.0	mg/kg	08.11.19 04.55		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	08.11.19 04.55	
o-Terphenyl	84-15-1	95	%	70-135	08.11.19 04.55	

Certificate of Analytical Results 633408

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id: **PH03A**
Lab Sample Id: 633408-001

Matrix: Soil
Date Collected: 08.02.19 13.00

Date Received: 08.08.19 11.05
Sample Depth: 20 ft

Analytical Method: BTEX by EPA 8021B
Tech: KTL
Analyst: ALG
Seq Number: 3098269

Date Prep: 08.08.19 15.16

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.10.19 11.42	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.10.19 11.42	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.10.19 11.42	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	08.10.19 11.42	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.10.19 11.42	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.10.19 11.42	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.10.19 11.42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	120	%	70-130	08.10.19 11.42	
1,4-Difluorobenzene	540-36-3	103	%	70-130	08.10.19 11.42	

Certificate of Analytical Results 633408

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id: **PH04A** Matrix: Soil Date Received: 08.08.19 11.05
Lab Sample Id: 633408-002 Date Collected: 08.05.19 09.55 Sample Depth: 20 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: CHE % Moisture:
Analyst: CHE Date Prep: 08.08.19 13.30 Basis: Wet Weight
Seq Number: 3097977

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1750**	24.8	mg/kg	08.08.19 15.19		5

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: DVM % Moisture:
Analyst: ARM Date Prep: 08.09.19 15.00 Basis: Wet Weight
Seq Number: 3098133

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.11.19 05.14	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.11.19 05.14	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.11.19 05.14	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.11.19 05.14	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.11.19 05.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	08.11.19 05.14	
o-Terphenyl	84-15-1	88	%	70-135	08.11.19 05.14	

Certificate of Analytical Results 633408

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id: **PH04A**
Lab Sample Id: 633408-002

Matrix: Soil
Date Collected: 08.05.19 09.55

Date Received: 08.08.19 11.05
Sample Depth: 20 ft

Analytical Method: BTEX by EPA 8021B
Tech: KTL
Analyst: ALG
Seq Number: 3098269

Date Prep: 08.08.19 15.16

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.10.19 12.03	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.10.19 12.03	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.10.19 12.03	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	08.10.19 12.03	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.10.19 12.03	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.10.19 12.03	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.10.19 12.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	115	%	70-130	08.10.19 12.03	
1,4-Difluorobenzene	540-36-3	104	%	70-130	08.10.19 12.03	

Certificate of Analytical Results 633408

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id:	**PH05A**	Matrix:	Soil	Date Received:	08.08.19 11.05
Lab Sample Id:	633408-003	Date Collected:	08.05.19 10.25	Sample Depth:	14 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.08.19 13.30	Basis:	Wet Weight
Seq Number:	3097977				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**813**	5.00	mg/kg	08.08.19 15.25		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.09.19 15.00	Basis:	Wet Weight
Seq Number:	3098133				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**16.7**	14.9	mg/kg	08.11.19 05.33		1
Diesel Range Organics (DRO)	C10C28DRO	**340**	14.9	mg/kg	08.11.19 05.33		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**39.5**	14.9	mg/kg	08.11.19 05.33		1
Total TPH	PHC635	**396**	14.9	mg/kg	08.11.19 05.33		1
Total GRO-DRO	PHC628	**357**	14.9	mg/kg	08.11.19 05.33		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	08.11.19 05.33	
o-Terphenyl	84-15-1	99	%	70-135	08.11.19 05.33	

Certificate of Analytical Results 633408

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id: **PH05A**
Lab Sample Id: 633408-003

Matrix: Soil
Date Collected: 08.05.19 10.25

Date Received: 08.08.19 11.05
Sample Depth: 14 ft

Analytical Method: BTEX by EPA 8021B
Tech: KTL
Analyst: ALG
Seq Number: 3098269

Date Prep: 08.08.19 15.16

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.10.19 12.23	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.10.19 12.23	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.10.19 12.23	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.10.19 12.23	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.10.19 12.23	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.10.19 12.23	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.10.19 12.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	93	%	70-130	08.10.19 12.23	
4-Bromofluorobenzene	460-00-4	122	%	70-130	08.10.19 12.23	

Certificate of Analytical Results 633408

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id: **PH06A** Matrix: Soil Date Received:08.08.19 11.05
Lab Sample Id: 633408-004 Date Collected: 08.05.19 12.00 Sample Depth: 16 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: CHE % Moisture:
Analyst: CHE Date Prep: 08.08.19 13.30 Basis: Wet Weight
Seq Number: 3097977

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**5430**	50.2	mg/kg	08.08.19 15.31		10

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: DVM % Moisture:
Analyst: ARM Date Prep: 08.09.19 15.00 Basis: Wet Weight
Seq Number: 3098133

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.11.19 05.51	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.11.19 05.51	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.11.19 05.51	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.11.19 05.51	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.11.19 05.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	08.11.19 05.51	
o-Terphenyl	84-15-1	93	%	70-135	08.11.19 05.51	

Certificate of Analytical Results 633408

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id: **PH06A**
Lab Sample Id: 633408-004

Matrix: Soil
Date Collected: 08.05.19 12.00

Date Received: 08.08.19 11.05
Sample Depth: 16 ft

Analytical Method: BTEX by EPA 8021B
Tech: KTL
Analyst: ALG
Seq Number: 3098269

Date Prep: 08.08.19 15.16

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.10.19 12.43	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.10.19 12.43	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.10.19 12.43	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.10.19 12.43	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.10.19 12.43	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.10.19 12.43	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.10.19 12.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106	%	70-130	08.10.19 12.43	
4-Bromofluorobenzene	460-00-4	116	%	70-130	08.10.19 12.43	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 633408

LT Environmental, Inc.

Pickett Draw Federal #001

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3097977 Matrix: Solid Date Prep: 08.08.19
MB Sample Id: 7683800-1-BLK LCS Sample Id: 7683800-1-BKS LCSD Sample Id: 7683800-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	251	100	249	100	90-110	1	20	mg/kg	08.08.19 13:56	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3097977 Matrix: Soil Date Prep: 08.08.19
Parent Sample Id: 633408-001 MS Sample Id: 633408-001 S MSD Sample Id: 633408-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	16.4	250	266	100	266	100	90-110	0	20	mg/kg	08.08.19 14:15	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3097977 Matrix: Soil Date Prep: 08.08.19
Parent Sample Id: 633409-003 MS Sample Id: 633409-003 S MSD Sample Id: 633409-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	15.3	248	258	98	258	98	90-110	0	20	mg/kg	08.08.19 15:44	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3098133 Matrix: Solid Date Prep: 08.09.19
MB Sample Id: 7683942-1-BLK LCS Sample Id: 7683942-1-BKS LCSD Sample Id: 7683942-1-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)	<8.00	1000	1100	110	1130	113	70-135	3	20	mg/kg	08.11.19 02:06	
Diesel Range Organics (DRO)	<8.13	1000	993	99	1030	103	70-135	4	20	mg/kg	08.11.19 02:06	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	90		120		124		70-135	%	08.11.19 02:06
o-Terphenyl	91		98		107		70-135	%	08.11.19 02:06

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 633408

LT Environmental, Inc.

Pickett Draw Federal #001

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3098133 Matrix: Soil Date Prep: 08.09.19
Parent Sample Id: 633251-001 MS Sample Id: 633251-001 S MSD Sample Id: 633251-001 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)	<7.98	997	1190	119	1150	115	70-135	3	20	mg/kg	08.11.19 03:02	
Diesel Range Organics (DRO)	<8.10	997	1150	115	1170	117	70-135	2	20	mg/kg	08.11.19 03:02	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	127		126		70-135	%	08.11.19 03:02
o-Terphenyl	116		118		70-135	%	08.11.19 03:02

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3098269 Matrix: Solid Date Prep: 08.08.19
MB Sample Id: 7683824-1-BLK LCS Sample Id: 7683824-1-BKS LCSD Sample Id: 7683824-1-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	0.0789	79	0.0848	85	70-130	7	35	mg/kg	08.10.19 08:19	
Toluene	<0.00200	0.100	0.0776	78	0.0810	81	70-130	4	35	mg/kg	08.10.19 08:19	
Ethylbenzene	<0.00200	0.100	0.0876	88	0.0911	91	70-130	4	35	mg/kg	08.10.19 08:19	
m,p-Xylenes	<0.00400	0.200	0.176	88	0.183	92	70-130	4	35	mg/kg	08.10.19 08:19	
o-Xylene	<0.00200	0.100	0.0859	86	0.0891	89	70-130	4	35	mg/kg	08.10.19 08:19	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		100		102		70-130	%	08.10.19 08:19
4-Bromofluorobenzene	103		113		121		70-130	%	08.10.19 08:19

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3098269 Matrix: Soil Date Prep: 08.08.19
Parent Sample Id: 633407-021 MS Sample Id: 633407-021 S MSD Sample Id: 633407-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00198	0.0992	0.0923	93	0.0917	92	70-130	1	35	mg/kg	08.10.19 09:00	
Toluene	<0.00198	0.0992	0.0861	87	0.0866	87	70-130	1	35	mg/kg	08.10.19 09:00	
Ethylbenzene	<0.00198	0.0992	0.0951	96	0.0932	93	70-130	2	35	mg/kg	08.10.19 09:00	
m,p-Xylenes	<0.00397	0.198	0.193	97	0.188	94	70-130	3	35	mg/kg	08.10.19 09:00	
o-Xylene	<0.00198	0.0992	0.0970	98	0.0931	93	70-130	4	35	mg/kg	08.10.19 09:00	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		103		70-130	%	08.10.19 09:00
4-Bromofluorobenzene	127		119		70-130	%	08.10.19 09:00

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	

Chain of Custody

XENCO LABORATORIES

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296
Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)

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Work Order No: 633408

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, Tx 79705	City, State ZIP:	
Phone:	(432) 236-3849	Email:	llaumbach@ltenv.com, dmoir@ltenv.com

Work Order Comments

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

Project Name:	Pickett Draw Federal #001	Turn Around	
Project Number:	12919150	Routine	☐
P.O. Number:	Eddy County	Rush:	1 Day
Sampler's Name:	Lynda Laumbach	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	Yes (No)
Temperature (°C):	0.7 C	Thermometer ID:	
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Total Containers:	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
PH03A	S	08/02/2019	13:00	20'	1	X	X	X
PH04A	S	08/05/2019	9:35	20'	1	X	X	X
PH05A	S	08/05/2019	10:25	14'	1	X	X	X
PH06A	S	08/05/2019	12:00	16'	1	X	X	X

Work Order Notes

TAT starts the day recevied by the lab, if received by 4:30pm

Sample Comments

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 SiO2 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 **1631 / 245.1 / 7470 / 7471** : Hg

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Anna Byers	8/6/19 @ 1600	2 Anna Byers		8/6/19 16:20
3	Fed Ex	8/7/19 400	4		8/8/19
5			6		1105

Revised Date 051418 Rev. 2018.1

ORIGIN ID:CAOA (281) 240-4200
SAMPLE CUSTODY
XENCO LABORATORIES NM
1089 N CANAL ST

CARLSBAD, NM 88220
UNITED STATES US

SHIP DATE: 07AUG19
ACTWGT: 48.00 LB
CAD: 114488676/INET4160
DIMS: 24x10x10 IN

BILL SENDER

TO **SAMPLE RECEIVING**

3600 S COUNTY ROAD 1276

MIDLAND TX 79706
(432) 704-5440
INV:
PO:
REF:
DEPT:

567J3/E9E7/05A2

J192019062401uv

FedEx Express

THU - 08 AUG HOLD
PRIORITY OVERNIGHT
HLD
79706
TX-US **LBB**

TRK# 0201 **7759 3058 5567**

41 MAFA

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

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XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 08/08/2019 11:05:00 AM

Work Order #: 633408

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

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	.5
#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)?	**N/A**
#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: Brianna Teel Date: 08/08/2019
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 08/08/2019
Jessica Kramer

Analytical Report 634583

for

LT Environmental, Inc.

Project Manager: Dan Moir

Pickett Draw Federal #001

012919150

22-AUG-19

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-29), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142), North Carolina (681)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-19-19), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429), North Carolina (483)

22-AUG-19

Project Manager: **Dan Moir**
LT Environmental, Inc.
4600 W. 60th Avenue
Arvada, CO 80003

Reference: XENCO Report No(s): **634583**
Pickett Draw Federal #001
Project Address: Eddy County

Dan Moir:

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) 634583. 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. 634583 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

Sample Cross Reference 634583

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH10	S	08-15-19 10:05	7 ft	634583-001
PH10A	S	08-15-19 15:25	22 ft	634583-002
PH11	S	08-19-19 10:25	2 ft	634583-003
PH11A	S	08-19-19 10:30	4 ft	634583-004
PH12	S	08-19-19 11:00	4 ft	634583-005
PH12A	S	08-19-19 11:05	6 ft	634583-006
PH13	S	08-19-19 11:30	2 ft	634583-007
PH13A	S	08-19-19 11:35	4 ft	634583-008
PH14	S	08-19-19 11:45	2 ft	634583-009
PH14A	S	08-19-19 11:50	4 ft	634583-010
PH15	S	08-19-19 13:10	2 ft	634583-011
PH15A	S	08-19-19 13:15	4 ft	634583-012
SS05	S	08-19-19 14:20	0.5 ft	634583-013
SS06	S	08-19-19 14:35	0.5 ft	634583-014

CASE NARRATIVE

Client Name: LT Environmental, Inc.
Project Name: Pickett Draw Federal #001

Project ID: *012919150*
Work Order Number(s): *634583*

Report Date: *22-AUG-19*
Date Received: *08/20/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3099039 BTEX by EPA 8021B
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected.
Samples affected are: 634583-011.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 634583

LT Environmental, Inc., Arvada, CO

Project Name: Pickett Draw Federal #001

Project Id: 012919150
Contact: Dan Moir
Project Location: Eddy County

Date Received in Lab: Tue Aug-20-19 12:50 pm
Report Date: 22-AUG-19
Project Manager: Jessica Kramer

Analysis Requested	*Lab Id:*	634583-001		634583-002		634583-003		634583-004		634583-005		634583-006	
	Field Id:	PH10		PH10A		PH11		PH11A		PH12		PH12A	
	Depth:	7- ft		22- ft		2- ft		4- ft		4- ft		6- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Aug-15-19 10:05		Aug-15-19 15:25		Aug-19-19 10:25		Aug-19-19 10:30		Aug-19-19 11:00		Aug-19-19 11:05	
BTEX by EPA 8021B	*Extracted:*	Aug-20-19 14:49		Aug-20-19 14:49		Aug-20-19 14:49		Aug-20-19 14:49		Aug-20-19 14:49		Aug-20-19 14:49	
	Analyzed:	Aug-20-19 16:34		Aug-20-19 16:53		Aug-20-19 17:13		Aug-20-19 17:33		Aug-20-19 17:53		Aug-20-19 18:12	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.000996	0.000996	<0.000996	0.000996	<0.000998	0.000998	<0.000996	0.000996	<0.00100	0.00100	<0.000996	0.000996
Toluene		<0.000996	0.000996	<0.000996	0.000996	<0.000998	0.000998	<0.000996	0.000996	<0.00100	0.00100	<0.000996	0.000996
Ethylbenzene		<0.000996	0.000996	<0.000996	0.000996	<0.000998	0.000998	<0.000996	0.000996	<0.00100	0.00100	<0.000996	0.000996
m,p-Xylenes		<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199
o-Xylene		<0.000996	0.000996	<0.000996	0.000996	<0.000998	0.000998	<0.000996	0.000996	<0.00100	0.00100	<0.000996	0.000996
Total Xylenes		<0.000996	0.000996	<0.000996	0.000996	<0.000998	0.000998	<0.000996	0.000996	<0.00100	0.00100	<0.000996	0.000996
Total BTEX		<0.000996	0.000996	<0.000996	0.000996	<0.000998	0.000998	<0.000996	0.000996	<0.00100	0.00100	<0.000996	0.000996
Chloride by EPA 300	*Extracted:*	Aug-20-19 16:08		Aug-20-19 16:08		Aug-20-19 16:08		Aug-20-19 16:08		Aug-20-19 16:08		Aug-20-19 16:08	
	Analyzed:	Aug-20-19 18:46		Aug-20-19 19:14		Aug-20-19 19:21		Aug-20-19 19:27		Aug-20-19 19:34		Aug-20-19 19:54	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		1380	98.4	4240	100	355	9.84	265	10.0	1620	50.3	2000	50.0
TPH by SW8015 Mod	*Extracted:*	Aug-20-19 14:49		Aug-20-19 14:49		Aug-20-19 14:49		Aug-20-19 14:49		Aug-20-19 14:49		Aug-20-19 14:49	
	Analyzed:	Aug-20-19 17:03		Aug-20-19 17:23		Aug-20-19 17:44		Aug-20-19 18:04		Aug-20-19 18:25		Aug-20-19 18:46	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<24.9	24.9	<24.9	24.9	<24.9	24.9	<24.9	24.9	<24.9	24.9	<25.0	25.0
Diesel Range Organics (DRO)		<24.9	24.9	<24.9	24.9	<24.9	24.9	<24.9	24.9	<24.9	24.9	<25.0	25.0
Motor Oil Range Hydrocarbons (MRO)		<24.9	24.9	<24.9	24.9	<24.9	24.9	<24.9	24.9	<24.9	24.9	<25.0	25.0
Total TPH		<24.9	24.9	<24.9	24.9	<24.9	24.9	<24.9	24.9	<24.9	24.9	<25.0	25.0
Total GRO-DRO		<24.9	24.9	<24.9	24.9	<24.9	24.9	<24.9	24.9	<24.9	24.9	<25.0	25.0

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

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 634583

LT Environmental, Inc., Arvada, CO

Project Name: Pickett Draw Federal #001

Project Id: 012919150
Contact: Dan Moir
Project Location: Eddy County

Date Received in Lab: Tue Aug-20-19 12:50 pm
Report Date: 22-AUG-19
Project Manager: Jessica Kramer

Analysis Requested	*Lab Id:*	634583-007		634583-008		634583-009		634583-010		634583-011		634583-012	
	Field Id:	PH13		PH13A		PH14		PH14A		PH15		PH15A	
	Depth:	2- ft		4- ft		2- ft		4- ft		2- ft		4- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Aug-19-19 11:30		Aug-19-19 11:35		Aug-19-19 11:45		Aug-19-19 11:50		Aug-19-19 13:10		Aug-19-19 13:15	
BTEX by EPA 8021B	*Extracted:*	Aug-20-19 14:49		Aug-20-19 14:49		Aug-20-19 14:49		Aug-20-19 14:49		Aug-20-19 14:49		Aug-20-19 14:49	
	Analyzed:	Aug-20-19 18:32		Aug-20-19 18:53		Aug-20-19 19:13		Aug-20-19 19:33		Aug-20-19 20:32		Aug-20-19 20:52	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.000994	0.000994	<0.000996	0.000996	<0.000994	0.000994	<0.000996	0.000996	<0.000990	0.000990	<0.000994	0.000994
Toluene		<0.000994	0.000994	<0.000996	0.000996	<0.000994	0.000994	<0.000996	0.000996	<0.000990	0.000990	<0.000994	0.000994
Ethylbenzene		<0.000994	0.000994	<0.000996	0.000996	<0.000994	0.000994	<0.000996	0.000996	<0.000990	0.000990	<0.000994	0.000994
m,p-Xylenes		<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199	<0.00198	0.00198	<0.00199	0.00199
o-Xylene		<0.000994	0.000994	<0.000996	0.000996	<0.000994	0.000994	<0.000996	0.000996	<0.000990	0.000990	<0.000994	0.000994
Total Xylenes		<0.000994	0.000994	<0.000996	0.000996	<0.000994	0.000994	<0.000996	0.000996	<0.000990	0.000990	<0.000994	0.000994
Total BTEX		<0.000994	0.000994	<0.000996	0.000996	<0.000994	0.000994	<0.000996	0.000996	<0.000990	0.000990	<0.000994	0.000994
Chloride by EPA 300	*Extracted:*	Aug-20-19 16:08		Aug-20-19 16:08		Aug-20-19 16:08		Aug-20-19 16:08		Aug-20-19 16:08		Aug-20-19 16:08	
	Analyzed:	Aug-20-19 20:00		Aug-20-19 20:07		Aug-20-19 20:13		Aug-20-19 20:20		Aug-20-19 20:27		Aug-20-19 20:46	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		1390	49.2	903	49.7	3340	98.2	4330	100	1250	50.0	1860	49.2
TPH by SW8015 Mod	*Extracted:*	Aug-20-19 14:49		Aug-20-19 14:49		Aug-20-19 14:49		Aug-20-19 14:49		Aug-20-19 14:49		Aug-20-19 14:49	
	Analyzed:	Aug-20-19 19:07		Aug-20-19 19:28		Aug-20-19 19:49		Aug-20-19 20:10		Aug-20-19 20:51		Aug-20-19 21:12	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<25.0	25.0	<24.9	24.9	<24.9	24.9	<24.9	24.9	<25.0	25.0	<25.0	25.0
Diesel Range Organics (DRO)		<25.0	25.0	<24.9	24.9	<24.9	24.9	<24.9	24.9	<25.0	25.0	<25.0	25.0
Motor Oil Range Hydrocarbons (MRO)		<25.0	25.0	<24.9	24.9	<24.9	24.9	<24.9	24.9	<25.0	25.0	<25.0	25.0
Total TPH		<25.0	25.0	<24.9	24.9	<24.9	24.9	<24.9	24.9	<25.0	25.0	<25.0	25.0
Total GRO-DRO		<25.0	25.0	<24.9	24.9	<24.9	24.9	<24.9	24.9	<25.0	25.0	<25.0	25.0

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

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 634583

LT Environmental, Inc., Arvada, CO

Project Name: Pickett Draw Federal #001

Project Id: 012919150
Contact: Dan Moir
Project Location: Eddy County

Date Received in Lab: Tue Aug-20-19 12:50 pm
Report Date: 22-AUG-19
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	634583-013		634583-014					
	Field Id:	SS05		SS06					
	Depth:	0.5- ft		0.5- ft					
	Matrix:	SOIL		SOIL					
	Sampled:	Aug-19-19 14:20		Aug-19-19 14:35					
BTEX by EPA 8021B	***Extracted:***	Aug-20-19 14:49		Aug-20-19 14:49					
	Analyzed:	Aug-20-19 21:12		Aug-20-19 21:32					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.000998	0.000998	<0.000994	0.000994				
Toluene		<0.000998	0.000998	<0.000994	0.000994				
Ethylbenzene		<0.000998	0.000998	<0.000994	0.000994				
m,p-Xylenes		<0.00200	0.00200	<0.00199	0.00199				
o-Xylene		<0.000998	0.000998	<0.000994	0.000994				
Total Xylenes		<0.000998	0.000998	<0.000994	0.000994				
Total BTEX		<0.000998	0.000998	<0.000994	0.000994				
Chloride by EPA 300	***Extracted:***	Aug-20-19 16:08		Aug-20-19 16:08					
	Analyzed:	Aug-20-19 20:53		Aug-20-19 21:12					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		34.4	10.0	384	10.0				
TPH by SW8015 Mod	***Extracted:***	Aug-20-19 14:49		Aug-20-19 14:49					
	Analyzed:	Aug-20-19 21:32		Aug-20-19 21:53					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<24.9	24.9	<25.0	25.0				
Diesel Range Organics (DRO)		<24.9	24.9	<25.0	25.0				
Motor Oil Range Hydrocarbons (MRO)		<24.9	24.9	<25.0	25.0				
Total TPH		<24.9	24.9	<25.0	25.0				
Total GRO-DRO		<24.9	24.9	<25.0	25.0				

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

Jessica Kramer
Project Assistant

Certificate of Analytical Results 634583

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id: **PH10** Matrix: Soil Date Received:08.20.19 12.50
Lab Sample Id: 634583-001 Date Collected: 08.15.19 10.05 Sample Depth: 7 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 08.20.19 16.08 Basis: Wet Weight
Seq Number: 3099290

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1380**	98.4	mg/kg	08.20.19 18.46		10

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DTH % Moisture:
Analyst: DTH Date Prep: 08.20.19 14.49 Basis: Wet Weight
Seq Number: 3099052

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	08.20.19 17.03	U	1
Diesel Range Organics (DRO)	C10C28DRO	<24.9	24.9	mg/kg	08.20.19 17.03	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	08.20.19 17.03	U	1
Total TPH	PHC635	<24.9	24.9	mg/kg	08.20.19 17.03	U	1
Total GRO-DRO	PHC628	<24.9	24.9	mg/kg	08.20.19 17.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	08.20.19 17.03	
o-Terphenyl	84-15-1	108	%	70-135	08.20.19 17.03	

Certificate of Analytical Results 634583

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id: **PH10**
Lab Sample Id: 634583-001

Matrix: Soil
Date Collected: 08.15.19 10.05

Date Received: 08.20.19 12.50
Sample Depth: 7 ft

Analytical Method: BTEX by EPA 8021B
Tech: DTH
Analyst: DTH
Seq Number: 3099039

Date Prep: 08.20.19 14.49

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000996	0.000996	mg/kg	08.20.19 16.34	U	1
Toluene	108-88-3	<0.000996	0.000996	mg/kg	08.20.19 16.34	U	1
Ethylbenzene	100-41-4	<0.000996	0.000996	mg/kg	08.20.19 16.34	U	1
m,p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	08.20.19 16.34	U	1
o-Xylene	95-47-6	<0.000996	0.000996	mg/kg	08.20.19 16.34	U	1
Total Xylenes	1330-20-7	<0.000996	0.000996	mg/kg	08.20.19 16.34	U	1
Total BTEX		<0.000996	0.000996	mg/kg	08.20.19 16.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	95	%	80-120	08.20.19 16.34	
1,4-Difluorobenzene	540-36-3	92	%	80-120	08.20.19 16.34	

Certificate of Analytical Results 634583

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id: **PH10A** Matrix: Soil Date Received: 08.20.19 12.50
Lab Sample Id: 634583-002 Date Collected: 08.15.19 15.25 Sample Depth: 22 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 08.20.19 16.08 Basis: Wet Weight
Seq Number: 3099290

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**4240**	100	mg/kg	08.20.19 19.14		10

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DTH % Moisture:
Analyst: DTH Date Prep: 08.20.19 14.49 Basis: Wet Weight
Seq Number: 3099052

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	08.20.19 17.23	U	1
Diesel Range Organics (DRO)	C10C28DRO	<24.9	24.9	mg/kg	08.20.19 17.23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	08.20.19 17.23	U	1
Total TPH	PHC635	<24.9	24.9	mg/kg	08.20.19 17.23	U	1
Total GRO-DRO	PHC628	<24.9	24.9	mg/kg	08.20.19 17.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	08.20.19 17.23	
o-Terphenyl	84-15-1	108	%	70-135	08.20.19 17.23	

Certificate of Analytical Results 634583

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id: **PH10A**
Lab Sample Id: 634583-002

Matrix: Soil
Date Collected: 08.15.19 15.25

Date Received: 08.20.19 12.50
Sample Depth: 22 ft

Analytical Method: BTEX by EPA 8021B
Tech: DTH
Analyst: DTH
Seq Number: 3099039

Date Prep: 08.20.19 14.49

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000996	0.000996	mg/kg	08.20.19 16.53	U	1
Toluene	108-88-3	<0.000996	0.000996	mg/kg	08.20.19 16.53	U	1
Ethylbenzene	100-41-4	<0.000996	0.000996	mg/kg	08.20.19 16.53	U	1
m,p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	08.20.19 16.53	U	1
o-Xylene	95-47-6	<0.000996	0.000996	mg/kg	08.20.19 16.53	U	1
Total Xylenes	1330-20-7	<0.000996	0.000996	mg/kg	08.20.19 16.53	U	1
Total BTEX		<0.000996	0.000996	mg/kg	08.20.19 16.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	89	%	80-120	08.20.19 16.53	
4-Bromofluorobenzene	460-00-4	107	%	80-120	08.20.19 16.53	

Certificate of Analytical Results 634583

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id: **PH11** Matrix: Soil Date Received: 08.20.19 12.50
Lab Sample Id: 634583-003 Date Collected: 08.19.19 10.25 Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 08.20.19 16.08 Basis: Wet Weight
Seq Number: 3099290

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**355**	9.84	mg/kg	08.20.19 19.21		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DTH % Moisture:
Analyst: DTH Date Prep: 08.20.19 14.49 Basis: Wet Weight
Seq Number: 3099052

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	08.20.19 17.44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<24.9	24.9	mg/kg	08.20.19 17.44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	08.20.19 17.44	U	1
Total TPH	PHC635	<24.9	24.9	mg/kg	08.20.19 17.44	U	1
Total GRO-DRO	PHC628	<24.9	24.9	mg/kg	08.20.19 17.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	08.20.19 17.44	
o-Terphenyl	84-15-1	107	%	70-135	08.20.19 17.44	

Certificate of Analytical Results 634583

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id: **PH11**
Lab Sample Id: 634583-003

Matrix: Soil
Date Collected: 08.19.19 10.25

Date Received: 08.20.19 12.50
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B
Tech: DTH
Analyst: DTH
Seq Number: 3099039

Date Prep: 08.20.19 14.49

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000998	0.000998	mg/kg	08.20.19 17.13	U	1
Toluene	108-88-3	<0.000998	0.000998	mg/kg	08.20.19 17.13	U	1
Ethylbenzene	100-41-4	<0.000998	0.000998	mg/kg	08.20.19 17.13	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	08.20.19 17.13	U	1
o-Xylene	95-47-6	<0.000998	0.000998	mg/kg	08.20.19 17.13	U	1
Total Xylenes	1330-20-7	<0.000998	0.000998	mg/kg	08.20.19 17.13	U	1
Total BTEX		<0.000998	0.000998	mg/kg	08.20.19 17.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	94	%	80-120	08.20.19 17.13	
4-Bromofluorobenzene	460-00-4	90	%	80-120	08.20.19 17.13	

Certificate of Analytical Results 634583

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id: **PH11A** Matrix: Soil Date Received:08.20.19 12.50
Lab Sample Id: 634583-004 Date Collected: 08.19.19 10.30 Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 08.20.19 16.08 Basis: Wet Weight
Seq Number: 3099290

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**265**	10.0	mg/kg	08.20.19 19.27		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DTH % Moisture:
Analyst: DTH Date Prep: 08.20.19 14.49 Basis: Wet Weight
Seq Number: 3099052

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	08.20.19 18.04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<24.9	24.9	mg/kg	08.20.19 18.04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	08.20.19 18.04	U	1
Total TPH	PHC635	<24.9	24.9	mg/kg	08.20.19 18.04	U	1
Total GRO-DRO	PHC628	<24.9	24.9	mg/kg	08.20.19 18.04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	08.20.19 18.04	
o-Terphenyl	84-15-1	111	%	70-135	08.20.19 18.04	

Certificate of Analytical Results 634583

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id: **PH11A**
Lab Sample Id: 634583-004

Matrix: Soil
Date Collected: 08.19.19 10.30

Date Received: 08.20.19 12.50
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B
Tech: DTH
Analyst: DTH
Seq Number: 3099039

Date Prep: 08.20.19 14.49

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000996	0.000996	mg/kg	08.20.19 17.33	U	1
Toluene	108-88-3	<0.000996	0.000996	mg/kg	08.20.19 17.33	U	1
Ethylbenzene	100-41-4	<0.000996	0.000996	mg/kg	08.20.19 17.33	U	1
m,p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	08.20.19 17.33	U	1
o-Xylene	95-47-6	<0.000996	0.000996	mg/kg	08.20.19 17.33	U	1
Total Xylenes	1330-20-7	<0.000996	0.000996	mg/kg	08.20.19 17.33	U	1
Total BTEX		<0.000996	0.000996	mg/kg	08.20.19 17.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	93	%	80-120	08.20.19 17.33	
4-Bromofluorobenzene	460-00-4	94	%	80-120	08.20.19 17.33	

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LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id:	**PH12**	Matrix:	Soil	Date Received:	08.20.19 12.50
Lab Sample Id:	634583-005	Date Collected:	08.19.19 11.00	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.20.19 16.08	Basis:	Wet Weight
Seq Number:	3099290				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1620**	50.3	mg/kg	08.20.19 19.34		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.20.19 14.49	Basis:	Wet Weight
Seq Number:	3099052				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	08.20.19 18.25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<24.9	24.9	mg/kg	08.20.19 18.25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	08.20.19 18.25	U	1
Total TPH	PHC635	<24.9	24.9	mg/kg	08.20.19 18.25	U	1
Total GRO-DRO	PHC628	<24.9	24.9	mg/kg	08.20.19 18.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	08.20.19 18.25	
o-Terphenyl	84-15-1	109	%	70-135	08.20.19 18.25	

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LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id: **PH12**
Lab Sample Id: 634583-005

Matrix: Soil
Date Collected: 08.19.19 11.00

Date Received: 08.20.19 12.50
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B
Tech: DTH
Analyst: DTH
Seq Number: 3099039

Date Prep: 08.20.19 14.49

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	08.20.19 17.53	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	08.20.19 17.53	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	08.20.19 17.53	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	08.20.19 17.53	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	08.20.19 17.53	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	08.20.19 17.53	U	1
Total BTEX		<0.00100	0.00100	mg/kg	08.20.19 17.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	102	%	80-120	08.20.19 17.53	
1,4-Difluorobenzene	540-36-3	98	%	80-120	08.20.19 17.53	

Certificate of Analytical Results 634583

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id: **PH12A** Matrix: Soil Date Received: 08.20.19 12.50
Lab Sample Id: 634583-006 Date Collected: 08.19.19 11.05 Sample Depth: 6 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 08.20.19 16.08 Basis: Wet Weight
Seq Number: 3099290

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2000**	50.0	mg/kg	08.20.19 19.54		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DTH % Moisture:
Analyst: DTH Date Prep: 08.20.19 14.49 Basis: Wet Weight
Seq Number: 3099052

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.20.19 18.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.20.19 18.46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.20.19 18.46	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.20.19 18.46	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.20.19 18.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	08.20.19 18.46	
o-Terphenyl	84-15-1	108	%	70-135	08.20.19 18.46	

Certificate of Analytical Results 634583

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id: **PH12A**
Lab Sample Id: 634583-006

Matrix: Soil
Date Collected: 08.19.19 11.05

Date Received: 08.20.19 12.50
Sample Depth: 6 ft

Analytical Method: BTEX by EPA 8021B
Tech: DTH
Analyst: DTH
Seq Number: 3099039

Date Prep: 08.20.19 14.49

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000996	0.000996	mg/kg	08.20.19 18.12	U	1
Toluene	108-88-3	<0.000996	0.000996	mg/kg	08.20.19 18.12	U	1
Ethylbenzene	100-41-4	<0.000996	0.000996	mg/kg	08.20.19 18.12	U	1
m,p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	08.20.19 18.12	U	1
o-Xylene	95-47-6	<0.000996	0.000996	mg/kg	08.20.19 18.12	U	1
Total Xylenes	1330-20-7	<0.000996	0.000996	mg/kg	08.20.19 18.12	U	1
Total BTEX		<0.000996	0.000996	mg/kg	08.20.19 18.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	92	%	80-120	08.20.19 18.12	
4-Bromofluorobenzene	460-00-4	96	%	80-120	08.20.19 18.12	

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LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id: **PH13** Matrix: Soil Date Received: 08.20.19 12.50
Lab Sample Id: 634583-007 Date Collected: 08.19.19 11.30 Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 08.20.19 16.08 Basis: Wet Weight
Seq Number: 3099290

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1390**	49.2	mg/kg	08.20.19 20.00		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DTH % Moisture:
Analyst: DTH Date Prep: 08.20.19 14.49 Basis: Wet Weight
Seq Number: 3099052

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.20.19 19.07	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.20.19 19.07	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.20.19 19.07	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.20.19 19.07	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.20.19 19.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	08.20.19 19.07	
o-Terphenyl	84-15-1	106	%	70-135	08.20.19 19.07	

Certificate of Analytical Results 634583

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id: **PH13**
Lab Sample Id: 634583-007

Matrix: Soil
Date Collected: 08.19.19 11.30

Date Received: 08.20.19 12.50
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B
Tech: DTH
Analyst: DTH
Seq Number: 3099039

Date Prep: 08.20.19 14.49

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000994	0.000994	mg/kg	08.20.19 18.32	U	1
Toluene	108-88-3	<0.000994	0.000994	mg/kg	08.20.19 18.32	U	1
Ethylbenzene	100-41-4	<0.000994	0.000994	mg/kg	08.20.19 18.32	U	1
m,p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	08.20.19 18.32	U	1
o-Xylene	95-47-6	<0.000994	0.000994	mg/kg	08.20.19 18.32	U	1
Total Xylenes	1330-20-7	<0.000994	0.000994	mg/kg	08.20.19 18.32	U	1
Total BTEX		<0.000994	0.000994	mg/kg	08.20.19 18.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	95	%	80-120	08.20.19 18.32	
4-Bromofluorobenzene	460-00-4	96	%	80-120	08.20.19 18.32	

Certificate of Analytical Results 634583

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id: **PH13A** Matrix: Soil Date Received: 08.20.19 12.50
Lab Sample Id: 634583-008 Date Collected: 08.19.19 11.35 Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 08.20.19 16.08 Basis: Wet Weight
Seq Number: 3099290

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**903**	49.7	mg/kg	08.20.19 20.07		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DTH % Moisture:
Analyst: DTH Date Prep: 08.20.19 14.49 Basis: Wet Weight
Seq Number: 3099052

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	08.20.19 19.28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<24.9	24.9	mg/kg	08.20.19 19.28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	08.20.19 19.28	U	1
Total TPH	PHC635	<24.9	24.9	mg/kg	08.20.19 19.28	U	1
Total GRO-DRO	PHC628	<24.9	24.9	mg/kg	08.20.19 19.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	08.20.19 19.28	
o-Terphenyl	84-15-1	108	%	70-135	08.20.19 19.28	

Certificate of Analytical Results 634583

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id: **PH13A**
Lab Sample Id: 634583-008

Matrix: Soil
Date Collected: 08.19.19 11.35

Date Received: 08.20.19 12.50
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B
Tech: DTH
Analyst: DTH
Seq Number: 3099039

Date Prep: 08.20.19 14.49

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000996	0.000996	mg/kg	08.20.19 18.53	U	1
Toluene	108-88-3	<0.000996	0.000996	mg/kg	08.20.19 18.53	U	1
Ethylbenzene	100-41-4	<0.000996	0.000996	mg/kg	08.20.19 18.53	U	1
m,p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	08.20.19 18.53	U	1
o-Xylene	95-47-6	<0.000996	0.000996	mg/kg	08.20.19 18.53	U	1
Total Xylenes	1330-20-7	<0.000996	0.000996	mg/kg	08.20.19 18.53	U	1
Total BTEX		<0.000996	0.000996	mg/kg	08.20.19 18.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	91	%	80-120	08.20.19 18.53	
1,4-Difluorobenzene	540-36-3	97	%	80-120	08.20.19 18.53	

Certificate of Analytical Results 634583

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id: **PH14** Matrix: Soil Date Received: 08.20.19 12.50
Lab Sample Id: 634583-009 Date Collected: 08.19.19 11.45 Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 08.20.19 16.08 Basis: Wet Weight
Seq Number: 3099290

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**3340**	98.2	mg/kg	08.20.19 20.13		10

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DTH % Moisture:
Analyst: DTH Date Prep: 08.20.19 14.49 Basis: Wet Weight
Seq Number: 3099052

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	08.20.19 19.49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<24.9	24.9	mg/kg	08.20.19 19.49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	08.20.19 19.49	U	1
Total TPH	PHC635	<24.9	24.9	mg/kg	08.20.19 19.49	U	1
Total GRO-DRO	PHC628	<24.9	24.9	mg/kg	08.20.19 19.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	08.20.19 19.49	
o-Terphenyl	84-15-1	109	%	70-135	08.20.19 19.49	

Certificate of Analytical Results 634583

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id: **PH14**
Lab Sample Id: 634583-009

Matrix: Soil
Date Collected: 08.19.19 11.45

Date Received: 08.20.19 12.50
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B
Tech: DTH
Analyst: DTH
Seq Number: 3099039

Date Prep: 08.20.19 14.49

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000994	0.000994	mg/kg	08.20.19 19.13	U	1
Toluene	108-88-3	<0.000994	0.000994	mg/kg	08.20.19 19.13	U	1
Ethylbenzene	100-41-4	<0.000994	0.000994	mg/kg	08.20.19 19.13	U	1
m,p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	08.20.19 19.13	U	1
o-Xylene	95-47-6	<0.000994	0.000994	mg/kg	08.20.19 19.13	U	1
Total Xylenes	1330-20-7	<0.000994	0.000994	mg/kg	08.20.19 19.13	U	1
Total BTEX		<0.000994	0.000994	mg/kg	08.20.19 19.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	98	%	80-120	08.20.19 19.13	
4-Bromofluorobenzene	460-00-4	99	%	80-120	08.20.19 19.13	

Certificate of Analytical Results 634583

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id: **PH14A** Matrix: Soil Date Received: 08.20.19 12.50
Lab Sample Id: 634583-010 Date Collected: 08.19.19 11.50 Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 08.20.19 16.08 Basis: Wet Weight
Seq Number: 3099290

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**4330**	100	mg/kg	08.20.19 20.20		10

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DTH % Moisture:
Analyst: DTH Date Prep: 08.20.19 14.49 Basis: Wet Weight
Seq Number: 3099052

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	08.20.19 20.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<24.9	24.9	mg/kg	08.20.19 20.10	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	08.20.19 20.10	U	1
Total TPH	PHC635	<24.9	24.9	mg/kg	08.20.19 20.10	U	1
Total GRO-DRO	PHC628	<24.9	24.9	mg/kg	08.20.19 20.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-135	08.20.19 20.10	
o-Terphenyl	84-15-1	117	%	70-135	08.20.19 20.10	

Certificate of Analytical Results 634583

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id: **PH14A**
Lab Sample Id: 634583-010

Matrix: Soil
Date Collected: 08.19.19 11.50

Date Received: 08.20.19 12.50
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B
Tech: DTH
Analyst: DTH
Seq Number: 3099039

Date Prep: 08.20.19 14.49

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000996	0.000996	mg/kg	08.20.19 19.33	U	1
Toluene	108-88-3	<0.000996	0.000996	mg/kg	08.20.19 19.33	U	1
Ethylbenzene	100-41-4	<0.000996	0.000996	mg/kg	08.20.19 19.33	U	1
m,p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	08.20.19 19.33	U	1
o-Xylene	95-47-6	<0.000996	0.000996	mg/kg	08.20.19 19.33	U	1
Total Xylenes	1330-20-7	<0.000996	0.000996	mg/kg	08.20.19 19.33	U	1
Total BTEX		<0.000996	0.000996	mg/kg	08.20.19 19.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	90	%	80-120	08.20.19 19.33	
1,4-Difluorobenzene	540-36-3	91	%	80-120	08.20.19 19.33	

Certificate of Analytical Results 634583

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id: **PH15** Matrix: Soil Date Received: 08.20.19 12.50
Lab Sample Id: 634583-011 Date Collected: 08.19.19 13.10 Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 08.20.19 16.08 Basis: Wet Weight
Seq Number: 3099290

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1250**	50.0	mg/kg	08.20.19 20.27		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DTH % Moisture:
Analyst: DTH Date Prep: 08.20.19 14.49 Basis: Wet Weight
Seq Number: 3099052

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.20.19 20.51	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.20.19 20.51	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.20.19 20.51	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.20.19 20.51	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.20.19 20.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	08.20.19 20.51	
o-Terphenyl	84-15-1	110	%	70-135	08.20.19 20.51	

Certificate of Analytical Results 634583

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id: **PH15**
Lab Sample Id: 634583-011

Matrix: Soil
Date Collected: 08.19.19 13.10

Date Received: 08.20.19 12.50
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B
Tech: DTH
Analyst: DTH
Seq Number: 3099039

Date Prep: 08.20.19 14.49

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000990	0.000990	mg/kg	08.20.19 20.32	U	1
Toluene	108-88-3	<0.000990	0.000990	mg/kg	08.20.19 20.32	U	1
Ethylbenzene	100-41-4	<0.000990	0.000990	mg/kg	08.20.19 20.32	U	1
m,p-Xylenes	179601-23-1	<0.00198	0.00198	mg/kg	08.20.19 20.32	U	1
o-Xylene	95-47-6	<0.000990	0.000990	mg/kg	08.20.19 20.32	U	1
Total Xylenes	1330-20-7	<0.000990	0.000990	mg/kg	08.20.19 20.32	U	1
Total BTEX		<0.000990	0.000990	mg/kg	08.20.19 20.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	126	%	80-120	08.20.19 20.32	**
1,4-Difluorobenzene	540-36-3	87	%	80-120	08.20.19 20.32	

Certificate of Analytical Results 634583

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id: **PH15A** Matrix: Soil Date Received: 08.20.19 12.50
Lab Sample Id: 634583-012 Date Collected: 08.19.19 13.15 Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 08.20.19 16.08 Basis: Wet Weight
Seq Number: 3099290

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1860**	49.2	mg/kg	08.20.19 20.46		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DTH % Moisture:
Analyst: DTH Date Prep: 08.20.19 14.49 Basis: Wet Weight
Seq Number: 3099052

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.20.19 21.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.20.19 21.12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.20.19 21.12	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.20.19 21.12	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.20.19 21.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	08.20.19 21.12	
o-Terphenyl	84-15-1	109	%	70-135	08.20.19 21.12	

Certificate of Analytical Results 634583

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id: **PH15A**
Lab Sample Id: 634583-012

Matrix: Soil
Date Collected: 08.19.19 13.15

Date Received: 08.20.19 12.50
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B
Tech: DTH
Analyst: DTH
Seq Number: 3099039

Date Prep: 08.20.19 14.49

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000994	0.000994	mg/kg	08.20.19 20.52	U	1
Toluene	108-88-3	<0.000994	0.000994	mg/kg	08.20.19 20.52	U	1
Ethylbenzene	100-41-4	<0.000994	0.000994	mg/kg	08.20.19 20.52	U	1
m,p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	08.20.19 20.52	U	1
o-Xylene	95-47-6	<0.000994	0.000994	mg/kg	08.20.19 20.52	U	1
Total Xylenes	1330-20-7	<0.000994	0.000994	mg/kg	08.20.19 20.52	U	1
Total BTEX		<0.000994	0.000994	mg/kg	08.20.19 20.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	96	%	80-120	08.20.19 20.52	
1,4-Difluorobenzene	540-36-3	95	%	80-120	08.20.19 20.52	

Certificate of Analytical Results 634583

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id:	**SS05**	Matrix:	Soil	Date Received:	08.20.19 12.50
Lab Sample Id:	634583-013	Date Collected:	08.19.19 14.20	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.20.19 16.08	Basis:	Wet Weight
Seq Number:	3099290				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**34.4**	10.0	mg/kg	08.20.19 20.53		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.20.19 14.49	Basis:	Wet Weight
Seq Number:	3099052				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	08.20.19 21.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<24.9	24.9	mg/kg	08.20.19 21.32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	08.20.19 21.32	U	1
Total TPH	PHC635	<24.9	24.9	mg/kg	08.20.19 21.32	U	1
Total GRO-DRO	PHC628	<24.9	24.9	mg/kg	08.20.19 21.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	08.20.19 21.32	
o-Terphenyl	84-15-1	109	%	70-135	08.20.19 21.32	

Certificate of Analytical Results 634583

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id:	**SS05**	Matrix:	Soil	Date Received:	08.20.19 12.50
Lab Sample Id:	634583-013	Date Collected:	08.19.19 14.20	Sample Depth:	0.5 ft

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.20.19 14.49	Basis:	Wet Weight
Seq Number:	3099039				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000998	0.000998	mg/kg	08.20.19 21.12	U	1
Toluene	108-88-3	<0.000998	0.000998	mg/kg	08.20.19 21.12	U	1
Ethylbenzene	100-41-4	<0.000998	0.000998	mg/kg	08.20.19 21.12	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	08.20.19 21.12	U	1
o-Xylene	95-47-6	<0.000998	0.000998	mg/kg	08.20.19 21.12	U	1
Total Xylenes	1330-20-7	<0.000998	0.000998	mg/kg	08.20.19 21.12	U	1
Total BTEX		<0.000998	0.000998	mg/kg	08.20.19 21.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	92	%	80-120	08.20.19 21.12	
4-Bromofluorobenzene	460-00-4	92	%	80-120	08.20.19 21.12	

Certificate of Analytical Results 634583

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id: **SS06** Matrix: Soil Date Received: 08.20.19 12.50
Lab Sample Id: 634583-014 Date Collected: 08.19.19 14.35 Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 08.20.19 16.08 Basis: Wet Weight
Seq Number: 3099290

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**384**	10.0	mg/kg	08.20.19 21.12		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DTH % Moisture:
Analyst: DTH Date Prep: 08.20.19 14.49 Basis: Wet Weight
Seq Number: 3099052

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.20.19 21.53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.20.19 21.53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.20.19 21.53	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.20.19 21.53	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.20.19 21.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	08.20.19 21.53	
o-Terphenyl	84-15-1	113	%	70-135	08.20.19 21.53	

Certificate of Analytical Results 634583

LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

Sample Id:	**SS06**	Matrix:	Soil	Date Received:	08.20.19 12.50
Lab Sample Id:	634583-014	Date Collected:	08.19.19 14.35	Sample Depth:	0.5 ft

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.20.19 14.49	Basis:	Wet Weight
Seq Number:	3099039				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000994	0.000994	mg/kg	08.20.19 21.32	U	1
Toluene	108-88-3	<0.000994	0.000994	mg/kg	08.20.19 21.32	U	1
Ethylbenzene	100-41-4	<0.000994	0.000994	mg/kg	08.20.19 21.32	U	1
m,p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	08.20.19 21.32	U	1
o-Xylene	95-47-6	<0.000994	0.000994	mg/kg	08.20.19 21.32	U	1
Total Xylenes	1330-20-7	<0.000994	0.000994	mg/kg	08.20.19 21.32	U	1
Total BTEX		<0.000994	0.000994	mg/kg	08.20.19 21.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	90	%	80-120	08.20.19 21.32	
1,4-Difluorobenzene	540-36-3	94	%	80-120	08.20.19 21.32	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 634583

LT Environmental, Inc.

Pickett Draw Federal #001

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3099290 Matrix: Solid Date Prep: 08.20.19
MB Sample Id: 7684654-1-BLK LCS Sample Id: 7684654-1-BKS LCSD Sample Id: 7684654-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	300	300	100	301	100	80-120	0	20	mg/kg	08.20.19 18:32	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3099290 Matrix: Soil Date Prep: 08.20.19
Parent Sample Id: 634583-001 MS Sample Id: 634583-001 S MSD Sample Id: 634583-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1380	2470	4020	107	4040	107	80-120	0	20	mg/kg	08.20.19 18:52	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3099290 Matrix: Soil Date Prep: 08.20.19
Parent Sample Id: 634583-011 MS Sample Id: 634583-011 S MSD Sample Id: 634583-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1250	1250	2670	114	2600	108	80-120	3	20	mg/kg	08.20.19 20:33	

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3099052 Matrix: Solid Date Prep: 08.20.19
MB Sample Id: 7684595-1-BLK LCS Sample Id: 7684595-1-BKS LCSD Sample Id: 7684595-1-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)	<9.90	1000	1000	100	974	98	70-135	3	35	mg/kg	08.20.19 11:28	
Diesel Range Organics (DRO)	<9.90	1000	1030	103	992	100	70-135	4	35	mg/kg	08.20.19 11:28	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	130		115		115		70-135	%	08.20.19 11:28
o-Terphenyl	128		118		116		70-135	%	08.20.19 11:28

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

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

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

QC Summary 634583

LT Environmental, Inc.

Pickett Draw Federal #001

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3099052 Matrix: Soil Date Prep: 08.20.19
Parent Sample Id: 634529-001 MS Sample Id: 634529-001 S MSD Sample Id: 634529-001 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)	<9.91	1000	951	95	964	96	70-135	1	35	mg/kg	08.20.19 12:29	
Diesel Range Organics (DRO)	<9.91	1000	974	97	988	99	70-135	1	35	mg/kg	08.20.19 12:29	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	114		108		70-135	%	08.20.19 12:29
o-Terphenyl	122		112		70-135	%	08.20.19 12:29

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3099039 Matrix: Solid Date Prep: 08.20.19
MB Sample Id: 7684594-1-BLK LCS Sample Id: 7684594-1-BKS LCSD Sample Id: 7684594-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00101	0.101	0.0926	92	0.0944	95	70-130	2	35	mg/kg	08.20.19 10:59	
Toluene	<0.00101	0.101	0.0906	90	0.0948	95	70-130	5	35	mg/kg	08.20.19 10:59	
Ethylbenzene	<0.000503	0.101	0.0920	91	0.0956	96	71-129	4	35	mg/kg	08.20.19 10:59	
m,p-Xylenes	<0.00101	0.201	0.189	94	0.193	97	70-135	2	35	mg/kg	08.20.19 10:59	
o-Xylene	<0.000503	0.101	0.0951	94	0.0962	97	71-133	1	35	mg/kg	08.20.19 10:59	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	94		103		98		80-120	%	08.20.19 10:59
4-Bromofluorobenzene	93		110		103		80-120	%	08.20.19 10:59

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3099039 Matrix: Soil Date Prep: 08.20.19
Parent Sample Id: 634529-001 MS Sample Id: 634529-001 S MSD Sample Id: 634529-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000990	0.0990	0.0979	99	0.0923	93	70-130	6	35	mg/kg	08.20.19 12:38	
Toluene	<0.000990	0.0990	0.0932	94	0.0912	92	70-130	2	35	mg/kg	08.20.19 12:38	
Ethylbenzene	<0.000990	0.0990	0.0956	97	0.0941	95	71-129	2	35	mg/kg	08.20.19 12:38	
m,p-Xylenes	<0.000990	0.198	0.195	98	0.191	96	70-135	2	35	mg/kg	08.20.19 12:38	
o-Xylene	<0.000990	0.0990	0.0968	98	0.0948	95	71-133	2	35	mg/kg	08.20.19 12:38	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		106		80-120	%	08.20.19 12:38
4-Bromofluorobenzene	109		110		80-120	%	08.20.19 12:38

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

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

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

Chain of Custody

XENCO LABORATORIES

Work Order No: 1634583

Page 1 of 2

Project Manager:	Dean Allen	Bill to: (if different)	Pete Lister
Company Name:	LT Environmental, Inc. - Permian office	Company Name:	XTO Energy
Address:	2290 North A Street	Address:	
City, State ZIP:	Midland, Tx 79705	City, State ZIP:	
Phone:	(432) 295-3948	Email:	

Work Order Comments

Program: UST/PST ☐ RP ☐ Brownfields ☒ RRC ☐ Superfund ☐

State of Project:

Reporting Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐

Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Pickett Draw Federal #001	Turn Around	
Project Number:	03010-0010	Routine	X
P.O. Number:	Eddy County	Rush:	
Sampler's Name:	Linda Leonhardt	Due Date:	

SAMPLE RECEIPT	Temp Blank: Yes No	Wet Ice: Yes No
Temperature (°C):		Thermometer ID:
Received Intact:	Yes No	
Cooler Custody Seals:	Yes No N/A	Correction Factor:
Sample Custody Seals:	Yes No N/A	Total Containers:

ANALYSIS REQUEST

Work Order Notes

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	BTEX (SW8021B)	TPH (SW8015M)	Chloride (SW4500-Cl-B)
PR10	S	10/6/17	1005	2'	X	X	X
PR10A	S	10/6/17	1009	12'			
PR11	S	10/6/17	1025	2'			
PR11A	S		1030	4'			
PR12	S		1140	2'			
PR12A	S		1145	6'			
PR13	S		1130	2'			
PR13A	S		1135	4'			
PR14	S		1145	2'			
PR14A	S		1150	4'			

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 SiO2 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 1631 / 245.1 / 7470 / 7471 : Hg

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time

Chain of Custody

XENCO LABORATORIES

Work Order No: 1234593

Page 2 of 2

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc. - Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, Tx 79705	City, State ZIP:	
Phone:	(432) 240-4671	Email:	

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:	Pickard Drain Federal #001	Turn Around:	
Project Number:	01206401C	Routine:	X
P.O. Number:	Eddy County	Rush:	
Sampler's Name:	Lyndal Lounsbury	Due Date:	

SAMPLE RECEIPT

Temp Blank:	Yes No	Wet Ice:	Yes No
Temperature (°C):		Thermometer ID:	
Received Intact:	Yes No		
Cooler Custody Seals:	Yes No N/A	Correction Factor:	
Sample Custody Seals:	Yes No N/A	Total Containers:	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH 8015 (GRO + DRO)	BTEX 8021B (Benzene)	Chlorides 300.0 (EPA 300.0)
PH15	S	9/28/23	1310	0'		X	X	X
PH15A	S		1315	4'		X	X	X
~~PH16~~								
SB05	S		1420	0.5'		X	X	X
SB06	S		1435	0.5'		X	X	X

Work Order Notes

Sample Comments

Total 200.7 / 6010: 200.8 / 6020: 8RCRA 13PPM Ticket 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 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 1631 / 245.1 / 7470 / 7471 : Hg

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		9/28/23 1320			

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 08/20/2019 12:50:00 PM

Work Order #: 634583

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

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1.6
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**No**
#5 Custody Seals intact on sample bottles?	**No**
#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**
#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: Elizabeth McClellan Date: 08/21/2019

Checklist reviewed by: Jessica Kramer Date: 08/21/2019

Analytical Report 634606

for

LT Environmental, Inc.

Project Manager: Dan Moir

Picket Draw Federal #001

012919150

26-AUG-19

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-29), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142), North Carolina (681)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-19-19), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429), North Carolina (483)

26-AUG-19

Project Manager: **Dan Moir**
LT Environmental, Inc.
4600 W. 60th Avenue
Arvada, CO 80003

Reference: XENCO Report No(s): **634606**
Picket Draw Federal #001
Project Address: Eddy County

Dan Moir:

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) 634606. 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. 634606 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

Sample Cross Reference 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS01	S	08-15-19 10:40	1 ft	634606-001
FS02	S	08-15-19 10:45	1 ft	634606-002
FS03	S	08-15-19 10:50	1 ft	634606-003
FS04	S	08-15-19 11:00	1 ft	634606-004
FS05	S	08-15-19 11:05	1 ft	634606-005
FS06	S	08-15-19 11:10	1 ft	634606-006
FS07	S	08-15-19 11:20	2 ft	634606-007
FS08	S	08-15-19 11:25	2 ft	634606-008
FS09	S	08-15-19 11:30	2 ft	634606-009
FS10	S	08-15-19 11:35	2 ft	634606-010
FS11	S	08-15-19 11:45	2 ft	634606-011
FS12	S	08-15-19 11:55	3 ft	634606-012
SW01	S	08-15-19 12:05	0 - 1 ft	634606-013
SW02	S	08-15-19 12:10	0 - 3 ft	634606-014
FS13	S	08-15-19 12:20	3 ft	634606-015
SW03	S	08-15-19 12:30	0 - 7 ft	634606-016
SW04	S	08-15-19 13:00	0 - 4 ft	634606-017
FS14	S	08-15-19 13:20	3 ft	634606-018
FS15	S	08-15-19 14:15	4 ft	634606-019
FS16	S	08-15-19 14:25	4 ft	634606-020
FS17	S	08-15-19 14:35	4 ft	634606-021
FS18	S	08-15-19 14:45	4 ft	634606-022
FS19	S	08-15-19 14:55	4 ft	634606-023
FS20	S	08-15-19 15:10	4 ft	634606-024
FS21	S	08-15-19 15:20	4 ft	634606-025
FS22	S	08-19-19 12:00	5 ft	634606-026
FS23	S	08-19-19 12:10	5 ft	634606-027
FS24	S	08-19-19 12:15	5 ft	634606-028
FS25	S	08-19-19 13:10	5 ft	634606-029
FS26	S	08-19-19 13:15	6 ft	634606-030
FS27	S	08-19-19 13:25	7 ft	634606-031
SW05	S	08-19-19 13:30	0 - 5 ft	634606-032
SW06	S	08-19-19 13:45	0 - 5 ft	634606-033
FS28	S	08-19-19 13:55	4 ft	634606-034
FS29	S	08-19-19 14:00	4 ft	634606-035
FS30	S	08-19-19 14:10	4 ft	634606-036
SW07	S	08-19-19 14:20	0 - 7 ft	634606-037
SW08	S	08-19-19 14:30	0 - 4 ft	634606-038
FS31	S	08-19-19 14:40	2.5 ft	634606-039
SW09	S	08-19-19 14:50	0 - 4 ft	634606-040
SW10	S	08-19-19 15:00	0 - 4 ft	634606-041
SW11	S	08-19-19 15:10	0 - 4 ft	634606-042
SW12	S	08-19-19 15:20	0 - 2.5 ft	634606-043

Sample Cross Reference 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

SW13	S	08-19-19 15:30	0 - 2.5 ft	634606-044
SW14	S	08-19-19 15:40	0 - 2.5 ft	634606-045
SW15	S	08-19-19 15:50	0 - 2.5 ft	634606-046

CASE NARRATIVE

Client Name: LT Environmental, Inc.
Project Name: Picket Draw Federal #001

Project ID: *012919150*
Work Order Number(s): *634606*

Report Date: *26-AUG-19*
Date Received: *08/20/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3099039 BTEX by EPA 8021B
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected.
Samples affected are: 634606-003.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3099358 TPH by SW8015 Mod
Surrogate 1-Chlorooctane, Surrogate o-Terphenyl recovered above QC limits Data confirmed by re-analysis. Samples affected are: 7684790-1-BKS.

Batch: LBA-3099361 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.
Surrogate 4-Bromofluorobenzene recovered above QC limits Data confirmed by re-analysis. Samples affected are: 7684795-1-BKS,634606-006 S,634606-006 SD,634606-013.

Batch: LBA-3099404 BTEX by EPA 8021B
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 634606-024,634606-020.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3099498 TPH by SW8015 Mod
Lab Sample ID 634606-025 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD).
Diesel Range Organics (DRO), Analyst missed to spike MSD. Samples in the analytical batch are: 634606-025, -026, -027, -028, -029, -030.
The Laboratory Control Sample for Gasoline Range Hydrocarbons (GRO), Diesel Range Organics (DRO) is within laboratory Control Limits, therefore the data was accepted.

CASE NARRATIVE

Client Name: LT Environmental, Inc.
Project Name: Picket Draw Federal #001

Project ID: *012919150*
Work Order Number(s): *634606*

Report Date: *26-AUG-19*
Date Received: *08/20/2019*

Batch: LBA-3099530 BTEX by EPA 8021B
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 634606-032.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3099584 TPH by SW8015 Mod
Surrogate o-Terphenyl recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 634606-032,634606-044,634606-045,634606-046.
Surrogate 1-Chlorooctane recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 634606-042,634606-044,634606-045,634606-046.

Certificate of Analysis Summary 634606

LT Environmental, Inc., Arvada, CO

Project Name: Picket Draw Federal #001

Project Id: 012919150
Contact: Dan Moir
Project Location: Eddy County

Date Received in Lab: Tue Aug-20-19 12:50 pm
Report Date: 26-AUG-19
Project Manager: Jessica Kramer

Analysis Requested	*Lab Id:*	634606-001		634606-002		634606-003		634606-004		634606-005		634606-006	
	Field Id:	FS01		FS02		FS03		FS04		FS05		FS06	
	Depth:	1- ft		1- ft		1- ft		1- ft		1- ft		1- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Aug-15-19 10:40		Aug-15-19 10:45		Aug-15-19 10:50		Aug-15-19 11:00		Aug-15-19 11:05		Aug-15-19 11:10	
BTEX by EPA 8021B	*Extracted:*	Aug-20-19 14:49		Aug-20-19 14:49		Aug-20-19 14:49		Aug-20-19 14:49		Aug-20-19 14:49		Aug-21-19 10:08	
	Analyzed:	Aug-20-19 21:52		Aug-20-19 22:12		Aug-20-19 22:32		Aug-20-19 22:51		Aug-20-19 23:11		Aug-21-19 12:01	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00101	0.00101	<0.000990	0.000990	<0.000990	0.000990	<0.000994	0.000994	<0.000996	0.000996	<0.000994	0.000994
Toluene		<0.00101	0.00101	<0.000990	0.000990	<0.000990	0.000990	<0.000994	0.000994	<0.000996	0.000996	<0.000994	0.000994
Ethylbenzene		<0.00101	0.00101	<0.000990	0.000990	<0.000990	0.000990	<0.000994	0.000994	<0.000996	0.000996	<0.000994	0.000994
m,p-Xylenes		<0.00202	0.00202	<0.00198	0.00198	<0.00198	0.00198	<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199
o-Xylene		<0.00101	0.00101	<0.000990	0.000990	<0.000990	0.000990	<0.000994	0.000994	<0.000996	0.000996	<0.000994	0.000994
Total Xylenes		<0.00101	0.00101	<0.000990	0.000990	<0.000990	0.000990	<0.000994	0.000994	<0.000996	0.000996	<0.000994	0.000994
Total BTEX		<0.00101	0.00101	<0.000990	0.000990	<0.000990	0.000990	<0.000994	0.000994	<0.000996	0.000996	<0.000994	0.000994
Chloride by EPA 300	*Extracted:*	Aug-20-19 16:08		Aug-20-19 16:08		Aug-20-19 16:08		Aug-20-19 16:08		Aug-20-19 16:08		Aug-20-19 16:08	
	Analyzed:	Aug-20-19 21:19		Aug-20-19 21:26		Aug-20-19 21:32		Aug-20-19 21:39		Aug-20-19 21:45		Aug-20-19 21:52	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		969	20.0	142	10.0	256	10.1	176	9.96	196	9.94	51.8	20.0
TPH by SW8015 Mod	*Extracted:*	Aug-20-19 14:49		Aug-20-19 14:49		Aug-20-19 14:49		Aug-20-19 14:49		Aug-20-19 14:49		Aug-21-19 10:08	
	Analyzed:	Aug-20-19 22:13		Aug-20-19 22:33		Aug-20-19 22:54		Aug-20-19 23:14		Aug-20-19 23:34		Aug-21-19 13:51	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<25.2	25.2	<25.1	25.1	<25.1	25.1	<24.9	24.9	<24.9	24.9	<25.0	25.0
Diesel Range Organics (DRO)		<25.2	25.2	<25.1	25.1	<25.1	25.1	<24.9	24.9	29.2	24.9	<25.0	25.0
Motor Oil Range Hydrocarbons (MRO)		<25.2	25.2	<25.1	25.1	<25.1	25.1	<24.9	24.9	<24.9	24.9	<25.0	25.0
Total TPH		<25.2	25.2	<25.1	25.1	<25.1	25.1	<24.9	24.9	29.2	24.9	<25.0	25.0
Total GRO-DRO		<25.2	25.2	<25.1	25.1	<25.1	25.1	<24.9	24.9	29.2	24.9	<25.0	25.0

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Jessica Kramer
Project Assistant

Certificate of Analysis Summary 634606

LT Environmental, Inc., Arvada, CO

Project Name: Picket Draw Federal #001

Project Id: 012919150
Contact: Dan Moir
Project Location: Eddy County

Date Received in Lab: Tue Aug-20-19 12:50 pm
Report Date: 26-AUG-19
Project Manager: Jessica Kramer

Analysis Requested															
	Lab Id:	634606-007		634606-008		634606-009		634606-010		634606-011		634606-012			
	Field Id:	FS07		FS08		FS09		FS10		FS11		FS12			
	Depth:	2- ft		2- ft		2- ft		2- ft		2- ft		3- ft			
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL			
	Sampled:	Aug-15-19 11:20		Aug-15-19 11:25		Aug-15-19 11:30		Aug-15-19 11:35		Aug-15-19 11:45		Aug-15-19 11:55			
BTEX by EPA 8021B	***Extracted:***	Aug-21-19 10:08		Aug-21-19 10:08		Aug-21-19 10:08		Aug-21-19 10:08		Aug-21-19 10:08		Aug-21-19 10:08			
	Analyzed:	Aug-21-19 13:20		Aug-21-19 13:40		Aug-21-19 14:00		Aug-21-19 14:19		Aug-21-19 14:39		Aug-21-19 14:58			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Benzene		<0.000998	0.000998	<0.00101	0.00101	<0.000998	0.000998	<0.00101	0.00101	<0.000994	0.000994	<0.000990	0.000990		
Toluene		<0.000998	0.000998	<0.00101	0.00101	<0.000998	0.000998	<0.00101	0.00101	<0.000994	0.000994	<0.000990	0.000990		
Ethylbenzene		<0.000998	0.000998	<0.00101	0.00101	<0.000998	0.000998	0.00224	0.00101	<0.000994	0.000994	<0.000990	0.000990		
m,p-Xylenes		<0.00200	0.00200	<0.00202	0.00202	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199	<0.00198	0.00198		
o-Xylene		<0.000998	0.000998	<0.00101	0.00101	<0.000998	0.000998	<0.00101	0.00101	<0.000994	0.000994	<0.000990	0.000990		
Total Xylenes		<0.000998	0.000998	<0.00101	0.00101	<0.000998	0.000998	<0.00101	0.00101	<0.000994	0.000994	<0.000990	0.000990		
Total BTEX		<0.000998	0.000998	<0.00101	0.00101	<0.000998	0.000998	0.00224	0.00101	<0.000994	0.000994	<0.000990	0.000990		
Chloride by EPA 300	***Extracted:***	Aug-21-19 10:08		Aug-21-19 10:08		Aug-21-19 10:08		Aug-21-19 10:08		Aug-21-19 10:08		Aug-21-19 10:08			
	Analyzed:	Aug-21-19 20:24		Aug-21-19 20:43		Aug-21-19 20:50		Aug-21-19 20:56		Aug-21-19 21:03		Aug-21-19 21:23			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Chloride		195	9.94	189	10.0	237	10.1	74.0	10.0	350	9.98	274	10.0		
TPH by SW8015 Mod	***Extracted:***	Aug-21-19 10:08		Aug-21-19 10:08		Aug-21-19 10:08		Aug-21-19 10:08		Aug-21-19 10:08		Aug-21-19 10:08			
	Analyzed:	Aug-21-19 15:00		Aug-21-19 15:20		Aug-21-19 15:40		Aug-21-19 16:01		Aug-21-19 16:21		Aug-21-19 16:42			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Gasoline Range Hydrocarbons (GRO)		<24.9	24.9	<25.1	25.1	<25.1	25.1	<25.1	25.1	<24.9	24.9	<24.9	24.9		
Diesel Range Organics (DRO)		<24.9	24.9	83.7	25.1	27.7	25.1	<25.1	25.1	<24.9	24.9	<24.9	24.9		
Motor Oil Range Hydrocarbons (MRO)		<24.9	24.9	<25.1	25.1	<25.1	25.1	<25.1	25.1	<24.9	24.9	<24.9	24.9		
Total TPH		<24.9	24.9	83.7	25.1	27.7	25.1	<25.1	25.1	<24.9	24.9	<24.9	24.9		
Total GRO-DRO		<24.9	24.9	83.7	25.1	27.7	25.1	<25.1	25.1	<24.9	24.9	<24.9	24.9		

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Jessica Kramer
Project Assistant

Certificate of Analysis Summary 634606

LT Environmental, Inc., Arvada, CO

Project Name: Picket Draw Federal #001

Project Id: 012919150
Contact: Dan Moir
Project Location: Eddy County

Date Received in Lab: Tue Aug-20-19 12:50 pm
Report Date: 26-AUG-19
Project Manager: Jessica Kramer

Analysis Requested	*Lab Id:*	634606-013		634606-014		634606-015		634606-016		634606-017		634606-018	
	Field Id:	SW01		SW02		FS13		SW03		SW04		FS14	
	Depth:	0-1 ft		0-3 ft		3- ft		0-7 ft		0-4 ft		3- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Aug-15-19 12:05		Aug-15-19 12:10		Aug-15-19 12:20		Aug-15-19 12:30		Aug-15-19 13:00		Aug-15-19 13:20	
BTEX by EPA 8021B	*Extracted:*	Aug-21-19 10:08		Aug-21-19 10:08		Aug-21-19 10:08		Aug-22-19 09:08		Aug-21-19 10:08		Aug-22-19 09:08	
	Analyzed:	Aug-21-19 15:18		Aug-21-19 15:38		Aug-21-19 16:58		Aug-22-19 19:00		Aug-21-19 17:38		Aug-22-19 19:20	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.000998	0.000998	<0.00100	0.00100	<0.00100	0.00100	<0.00100	0.00100	<0.000998	0.000998	<0.000996	0.000996
Toluene		<0.000998	0.000998	<0.00100	0.00100	<0.00100	0.00100	<0.00100	0.00100	<0.000998	0.000998	<0.000996	0.000996
Ethylbenzene		<0.000998	0.000998	<0.00100	0.00100	<0.00100	0.00100	<0.00100	0.00100	<0.000998	0.000998	<0.000996	0.000996
m,p-Xylenes		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
o-Xylene		<0.000998	0.000998	<0.00100	0.00100	<0.00100	0.00100	<0.00100	0.00100	<0.000998	0.000998	<0.000996	0.000996
Total Xylenes		<0.000998	0.000998	<0.00100	0.00100	<0.00100	0.00100	<0.00100	0.00100	<0.000998	0.000998	<0.000996	0.000996
Total BTEX		<0.000998	0.000998	<0.00100	0.00100	<0.00100	0.00100	<0.00100	0.00100	<0.000998	0.000998	<0.000996	0.000996
Chloride by EPA 300	*Extracted:*	Aug-21-19 10:08		Aug-21-19 10:08		Aug-21-19 10:08		Aug-21-19 10:08		Aug-21-19 10:08		Aug-21-19 10:08	
	Analyzed:	Aug-21-19 21:29		Aug-21-19 21:36		Aug-21-19 21:42		Aug-21-19 21:49		Aug-21-19 21:55		Aug-21-19 22:15	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		723	10.0	512	10.0	319	10.0	504	10.0	43.0	9.90	38.2	9.84
TPH by SW8015 Mod	*Extracted:*	Aug-21-19 10:08		Aug-21-19 10:08		Aug-21-19 10:08		Aug-21-19 10:08		Aug-21-19 10:08		Aug-21-19 10:08	
	Analyzed:	Aug-21-19 17:03		Aug-21-19 17:24		Aug-21-19 18:26		Aug-21-19 18:46		Aug-21-19 19:07		Aug-21-19 19:27	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<25.1	25.1	<25.1	25.1	<25.1	25.1	<25.0	25.0	<25.0	25.0	<25.0	25.0
Diesel Range Organics (DRO)		42.3	25.1	<25.1	25.1	<25.1	25.1	50.1	25.0	<25.0	25.0	<25.0	25.0
Motor Oil Range Hydrocarbons (MRO)		<25.1	25.1	<25.1	25.1	<25.1	25.1	<25.0	25.0	<25.0	25.0	<25.0	25.0
Total TPH		42.3	25.1	<25.1	25.1	<25.1	25.1	50.1	25.0	<25.0	25.0	<25.0	25.0
Total GRO-DRO		42.3	25.1	<25.1	25.1	<25.1	25.1	50.1	25.0	<25.0	25.0	<25.0	25.0

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Jessica Kramer
Project Assistant

Certificate of Analysis Summary 634606

LT Environmental, Inc., Arvada, CO

Project Name: Picket Draw Federal #001

Project Id: 012919150
Contact: Dan Moir
Project Location: Eddy County

Date Received in Lab: Tue Aug-20-19 12:50 pm
Report Date: 26-AUG-19
Project Manager: Jessica Kramer

Analysis Requested															
	Lab Id:	634606-019		634606-020		634606-021		634606-022		634606-023		634606-024			
	Field Id:	FS15		FS16		FS17		FS18		FS19		FS20			
	Depth:	4- ft		4- ft		4- ft		4- ft		4- ft		4- ft			
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL			
	Sampled:	Aug-15-19 14:15		Aug-15-19 14:25		Aug-15-19 14:35		Aug-15-19 14:45		Aug-15-19 14:55		Aug-15-19 15:10			
BTEX by EPA 8021B	***Extracted:***	Aug-21-19 10:08		Aug-22-19 09:08		Aug-21-19 10:08		Aug-21-19 10:08		Aug-21-19 10:08		Aug-22-19 09:08			
	Analyzed:	Aug-21-19 18:17		Aug-22-19 19:40		Aug-21-19 18:57		Aug-21-19 19:17		Aug-21-19 19:37		Aug-22-19 20:00			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Benzene		<0.00100	0.00100	<0.000994	0.000994	<0.00100	0.00100	<0.000998	0.000998	<0.00100	0.00100	<0.00100	0.00100		
Toluene		<0.00100	0.00100	<0.000994	0.000994	<0.00100	0.00100	<0.000998	0.000998	<0.00100	0.00100	<0.00100	0.00100		
Ethylbenzene		<0.00100	0.00100	0.00243	0.000994	<0.00100	0.00100	<0.000998	0.000998	<0.00100	0.00100	0.00148	0.00100		
m,p-Xylenes		<0.00200	0.00200	0.0255	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	0.0104	0.00200		
o-Xylene		<0.00100	0.00100	0.0104	0.000994	<0.00100	0.00100	<0.000998	0.000998	<0.00100	0.00100	0.00791	0.00100		
Total Xylenes		<0.00100	0.00100	0.0359	0.000994	<0.00100	0.00100	<0.000998	0.000998	<0.00100	0.00100	0.0183	0.00100		
Total BTEX		<0.00100	0.00100	0.0383	0.000994	<0.00100	0.00100	<0.000998	0.000998	<0.00100	0.00100	0.0198	0.00100		
Chloride by EPA 300	***Extracted:***	Aug-21-19 10:08		Aug-21-19 10:08		Aug-21-19 10:08		Aug-21-19 10:08		Aug-21-19 10:08		Aug-21-19 10:08			
	Analyzed:	Aug-21-19 22:22		Aug-21-19 22:28		Aug-21-19 22:48		Aug-21-19 22:54		Aug-21-19 23:01		Aug-21-19 23:08			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Chloride		183	10.0	161	9.82	187	49.7	633	49.8	1150	99.8	1410	50.0		
TPH by SW8015 Mod	***Extracted:***	Aug-21-19 10:08		Aug-21-19 10:08		Aug-21-19 10:08		Aug-21-19 10:08		Aug-21-19 10:08		Aug-21-19 10:08			
	Analyzed:	Aug-21-19 19:48		Aug-21-19 20:08		Aug-21-19 20:28		Aug-21-19 20:49		Aug-21-19 21:09		Aug-21-19 21:29			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Gasoline Range Hydrocarbons (GRO)		<25.1	25.1	<25.0	25.0	<24.9	24.9	<24.9	24.9	<25.1	25.1	<25.1	25.1		
Diesel Range Organics (DRO)		152	25.1	586	25.0	57.6	24.9	59.0	24.9	42.2	25.1	190	25.1		
Motor Oil Range Hydrocarbons (MRO)		<25.1	25.1	<25.0	25.0	<24.9	24.9	<24.9	24.9	<25.1	25.1	<25.1	25.1		
Total TPH		152	25.1	586	25.0	57.6	24.9	59.0	24.9	42.2	25.1	190	25.1		
Total GRO-DRO		152	25.1	586	25.0	57.6	24.9	59.0	24.9	42.2	25.1	190	25.1		

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Jessica Kramer
Project Assistant

Certificate of Analysis Summary 634606

LT Environmental, Inc., Arvada, CO

Project Name: Picket Draw Federal #001

Project Id: 012919150
Contact: Dan Moir
Project Location: Eddy County

Date Received in Lab: Tue Aug-20-19 12:50 pm
Report Date: 26-AUG-19
Project Manager: Jessica Kramer

Analysis Requested	*Lab Id:*	634606-025		634606-026		634606-027		634606-028		634606-029		634606-030	
	Field Id:	FS21		FS22		FS23		FS24		FS25		FS26	
	Depth:	4- ft		5- ft		5- ft		5- ft		5- ft		6- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Aug-15-19 15:20		Aug-19-19 12:00		Aug-19-19 12:10		Aug-19-19 12:15		Aug-19-19 13:10		Aug-19-19 13:15	
BTEX by EPA 8021B	*Extracted:*	Aug-22-19 09:08		Aug-22-19 09:08		Aug-22-19 09:08		Aug-22-19 09:08		Aug-22-19 09:08		Aug-22-19 09:08	
	Analyzed:	Aug-22-19 11:10		Aug-22-19 11:29		Aug-22-19 11:49		Aug-22-19 12:09		Aug-22-19 12:29		Aug-22-19 12:49	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.000996	0.000996	<0.00101	0.00101	<0.000994	0.000994	<0.00100	0.00100	<0.000992	0.000992	<0.000990	0.000990
Toluene		<0.000996	0.000996	<0.00101	0.00101	<0.000994	0.000994	<0.00100	0.00100	<0.000992	0.000992	<0.000990	0.000990
Ethylbenzene		0.00117	0.000996	<0.00101	0.00101	<0.000994	0.000994	0.00341	0.00100	<0.000992	0.000992	<0.000990	0.000990
m,p-Xylenes		0.00576	0.00199	<0.00201	0.00201	<0.00199	0.00199	0.0260	0.00200	<0.00198	0.00198	<0.00198	0.00198
o-Xylene		0.00533	0.000996	<0.00101	0.00101	<0.000994	0.000994	0.0183	0.00100	<0.000992	0.000992	<0.000990	0.000990
Total Xylenes		0.0111	0.000996	<0.00101	0.00101	<0.000994	0.000994	0.0443	0.00100	<0.000992	0.000992	<0.000990	0.000990
Total BTEX		0.0123	0.000996	<0.00101	0.00101	<0.000994	0.000994	0.0477	0.00100	<0.000992	0.000992	<0.000990	0.000990
Chloride by EPA 300	*Extracted:*	Aug-21-19 10:08		Aug-21-19 10:08		Aug-21-19 10:08		Aug-21-19 10:08		Aug-21-19 10:08		Aug-21-19 10:08	
	Analyzed:	Aug-21-19 23:14		Aug-22-19 23:42		Aug-22-19 09:48		Aug-22-19 10:07		Aug-22-19 10:13		Aug-22-19 10:19	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		767	49.8	3820	99.8	1450	99.4	2240	99.8	1050	49.7	127	9.98
TPH by SW8015 Mod	*Extracted:*	Aug-22-19 09:30		Aug-22-19 09:30		Aug-22-19 09:30		Aug-22-19 09:30		Aug-22-19 09:30		Aug-22-19 09:30	
	Analyzed:	Aug-22-19 12:06		Aug-22-19 13:09		Aug-22-19 13:29		Aug-22-19 13:49		Aug-22-19 14:09		Aug-22-19 14:29	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		901	25.0	<25.0	25.0	<25.0	25.0	<25.0	25.0	<25.0	25.0	<24.9	24.9
Diesel Range Organics (DRO)		1170	25.0	<25.0	25.0	<25.0	25.0	319	25.0	<25.0	25.0	146	24.9
Motor Oil Range Hydrocarbons (MRO)		<25.0	25.0	<25.0	25.0	<25.0	25.0	<25.0	25.0	<25.0	25.0	<24.9	24.9
Total TPH		2070	25.0	<25.0	25.0	<25.0	25.0	319	25.0	<25.0	25.0	146	24.9
Total GRO-DRO		2070	25.0	<25.0	25.0	<25.0	25.0	319	25.0	<25.0	25.0	146	24.9

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Jessica Kramer
Project Assistant

Certificate of Analysis Summary 634606

LT Environmental, Inc., Arvada, CO

Project Name: Picket Draw Federal #001

Project Id: 012919150
Contact: Dan Moir
Project Location: Eddy County

Date Received in Lab: Tue Aug-20-19 12:50 pm
Report Date: 26-AUG-19
Project Manager: Jessica Kramer

Analysis Requested	*Lab Id:*	634606-031		634606-032		634606-033		634606-034		634606-035		634606-036	
	Field Id:	FS27		SW05		SW06		FS28		FS29		FS30	
	Depth:	7- ft		0-5 ft		0-5 ft		4- ft		4- ft		4- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Aug-19-19 13:25		Aug-19-19 13:30		Aug-19-19 13:45		Aug-19-19 13:55		Aug-19-19 14:00		Aug-19-19 14:10	
BTEX by EPA 8021B	*Extracted:*	Aug-22-19 09:08		Aug-23-19 14:08		Aug-23-19 14:08		Aug-23-19 14:08		Aug-22-19 09:08		Aug-22-19 09:08	
	Analyzed:	Aug-22-19 13:08		Aug-24-19 16:13		Aug-24-19 15:33		Aug-24-19 15:53		Aug-22-19 15:48		Aug-22-19 16:08	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.000996	0.000996	<0.500	0.500	<0.00100	0.00100	<0.00100	0.00100	<0.00101	0.00101	<0.00100	0.00100
Toluene		<0.000996	0.000996	2.08	0.500	<0.00100	0.00100	<0.00100	0.00100	<0.00101	0.00101	<0.00100	0.00100
Ethylbenzene		<0.000996	0.000996	2.60	0.500	<0.00100	0.00100	<0.00100	0.00100	<0.00101	0.00101	<0.00100	0.00100
m,p-Xylenes		<0.00199	0.00199	19.3	1.00	<0.00201	0.00201	<0.00200	0.00200	<0.00201	0.00201	<0.00201	0.00201
o-Xylene		<0.000996	0.000996	9.06	0.500	<0.00100	0.00100	<0.00100	0.00100	<0.00101	0.00101	<0.00100	0.00100
Total Xylenes		<0.000996	0.000996	28.4	0.500	<0.00100	0.00100	<0.00100	0.00100	<0.00101	0.00101	<0.00100	0.00100
Total BTEX		<0.000996	0.000996	33.0	0.500	<0.00100	0.00100	<0.00100	0.00100	<0.00101	0.00101	<0.00100	0.00100
Chloride by EPA 300	*Extracted:*	Aug-21-19 10:08		Aug-21-19 10:08		Aug-21-19 10:08		Aug-21-19 10:08		Aug-21-19 10:08		Aug-21-19 10:08	
	Analyzed:	Aug-22-19 11:03		Aug-22-19 11:09		Aug-22-19 11:16		Aug-22-19 11:22		Aug-22-19 11:28		Aug-22-19 11:35	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		66.5	10.0	188	10.0	56.7	10.0	894	49.4	812	49.8	854	50.1
TPH by SW8015 Mod	*Extracted:*	Aug-23-19 10:00		Aug-23-19 10:00		Aug-23-19 10:00		Aug-23-19 10:00		Aug-23-19 10:00		Aug-23-19 10:00	
	Analyzed:	Aug-23-19 13:30		Aug-23-19 13:50		Aug-23-19 14:10		Aug-23-19 14:30		Aug-23-19 14:50		Aug-23-19 15:10	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<24.9	24.9	615	25.0	<24.9	24.9	<25.0	25.0	<24.9	24.9	<25.1	25.1
Diesel Range Organics (DRO)		<24.9	24.9	3810	25.0	<24.9	24.9	<25.0	25.0	<24.9	24.9	<25.1	25.1
Motor Oil Range Hydrocarbons (MRO)		<24.9	24.9	<25.0	25.0	<24.9	24.9	<25.0	25.0	<24.9	24.9	<25.1	25.1
Total TPH		<24.9	24.9	4430	25.0	<24.9	24.9	<25.0	25.0	<24.9	24.9	<25.1	25.1
Total GRO-DRO		<24.9	24.9	4430	25.0	<24.9	24.9	<25.0	25.0	<24.9	24.9	<25.1	25.1

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Jessica Kramer
Project Assistant

Certificate of Analysis Summary 634606

LT Environmental, Inc., Arvada, CO

Project Name: Picket Draw Federal #001

Project Id: 012919150
Contact: Dan Moir
Project Location: Eddy County

Date Received in Lab: Tue Aug-20-19 12:50 pm
Report Date: 26-AUG-19
Project Manager: Jessica Kramer

Analysis Requested	*Lab Id:*	634606-037		634606-038		634606-039		634606-040		634606-041		634606-042	
	Field Id:	SW07		SW08		FS31		SW09		SW10		SW11	
	Depth:	0-7 ft		0-4 ft		2.5- ft		0-4 ft		0-4 ft		0-4 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Aug-19-19 14:20		Aug-19-19 14:30		Aug-19-19 14:40		Aug-19-19 14:50		Aug-19-19 15:00		Aug-19-19 15:10	
BTEX by EPA 8021B	*Extracted:*	Aug-22-19 09:08		Aug-22-19 09:08		Aug-22-19 09:08		Aug-22-19 09:08		Aug-23-19 14:08		Aug-23-19 14:08	
	Analyzed:	Aug-22-19 16:48		Aug-22-19 17:07		Aug-22-19 18:21		Aug-22-19 18:41		Aug-24-19 13:34		Aug-24-19 13:54	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.000998	0.000998	<0.00101	0.00101	<0.000994	0.000994	<0.000994	0.000994	<0.00100	0.00100	<0.000992	0.000992
Toluene		0.00107	0.000998	<0.00101	0.00101	<0.000994	0.000994	<0.000994	0.000994	<0.00100	0.00100	<0.000992	0.000992
Ethylbenzene		<0.000998	0.000998	<0.00101	0.00101	<0.000994	0.000994	<0.000994	0.000994	<0.00100	0.00100	<0.000992	0.000992
m,p-Xylenes		<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200	<0.00198	0.00198
o-Xylene		<0.000998	0.000998	<0.00101	0.00101	<0.000994	0.000994	<0.000994	0.000994	<0.00100	0.00100	<0.000992	0.000992
Total Xylenes		<0.000998	0.000998	<0.00101	0.00101	<0.000994	0.000994	<0.000994	0.000994	<0.00100	0.00100	<0.000992	0.000992
Total BTEX		0.00107	0.000998	<0.00101	0.00101	<0.000994	0.000994	<0.000994	0.000994	<0.00100	0.00100	<0.000992	0.000992
Chloride by EPA 300	*Extracted:*	Aug-21-19 10:08		Aug-21-19 10:08		Aug-21-19 10:08		Aug-21-19 10:08		Aug-21-19 10:08		Aug-21-19 10:08	
	Analyzed:	Aug-22-19 11:41		Aug-22-19 12:00		Aug-22-19 12:25		Aug-22-19 12:32		Aug-22-19 12:38		Aug-22-19 12:44	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		49.8	10.0	724	50.1	646	50.0	42.9	9.94	801	49.9	47.0	9.92
TPH by SW8015 Mod	*Extracted:*	Aug-23-19 10:00		Aug-23-19 10:00		Aug-23-19 10:00		Aug-23-19 10:00		Aug-23-19 10:00		Aug-23-19 10:00	
	Analyzed:	Aug-23-19 15:30		Aug-23-19 16:10		Aug-23-19 16:30		Aug-23-19 16:50		Aug-23-19 17:10		Aug-23-19 17:30	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<25.0	25.0	<24.9	24.9	<25.1	25.1	<25.1	25.1	<25.0	25.0	<25.1	25.1
Diesel Range Organics (DRO)		<25.0	25.0	<24.9	24.9	<25.1	25.1	<25.1	25.1	86.2	25.0	<25.1	25.1
Motor Oil Range Hydrocarbons (MRO)		<25.0	25.0	<24.9	24.9	<25.1	25.1	<25.1	25.1	<25.0	25.0	<25.1	25.1
Total TPH		<25.0	25.0	<24.9	24.9	<25.1	25.1	<25.1	25.1	86.2	25.0	<25.1	25.1
Total GRO-DRO		<25.0	25.0	<24.9	24.9	<25.1	25.1	<25.1	25.1	86.2	25.0	<25.1	25.1

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Jessica Kramer
Project Assistant

Certificate of Analysis Summary 634606

LT Environmental, Inc., Arvada, CO

Project Name: Picket Draw Federal #001

Project Id: 012919150
Contact: Dan Moir
Project Location: Eddy County

Date Received in Lab: Tue Aug-20-19 12:50 pm
Report Date: 26-AUG-19
Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	634606-043		634606-044		634606-045		634606-046			
	Field Id:	SW12		SW13		SW14		SW15			
	Depth:	0-2.5 ft		0-2.5 ft		0-2.5 ft		0-2.5 ft			
	Matrix:	SOIL		SOIL		SOIL		SOIL			
	Sampled:	Aug-19-19 15:20		Aug-19-19 15:30		Aug-19-19 15:40		Aug-19-19 15:50			
BTEX by EPA 8021B	***Extracted:***	Aug-23-19 14:08		Aug-23-19 14:08		Aug-23-19 14:08		Aug-23-19 14:08			
	Analyzed:	Aug-24-19 14:13		Aug-24-19 14:33		Aug-24-19 14:54		Aug-24-19 15:14			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Benzene		<0.000990	0.000990	<0.00100	0.00100	<0.00100	0.00100	<0.000998	0.000998		
Toluene		<0.000990	0.000990	<0.00100	0.00100	<0.00100	0.00100	<0.000998	0.000998		
Ethylbenzene		<0.000990	0.000990	<0.00100	0.00100	<0.00100	0.00100	<0.000998	0.000998		
m,p-Xylenes		<0.00198	0.00198	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200		
o-Xylene		<0.000990	0.000990	<0.00100	0.00100	<0.00100	0.00100	<0.000998	0.000998		
Total Xylenes		<0.000990	0.000990	<0.00100	0.00100	<0.00100	0.00100	<0.000998	0.000998		
Total BTEX		<0.000990	0.000990	<0.00100	0.00100	<0.00100	0.00100	<0.000998	0.000998		
Chloride by EPA 300	***Extracted:***	Aug-21-19 10:08		Aug-21-19 10:08		Aug-21-19 10:08		Aug-21-19 10:08			
	Analyzed:	Aug-22-19 12:51		Aug-22-19 12:57		Aug-22-19 13:04		Aug-22-19 13:10			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Chloride		1760	49.7	684	49.7	1450	49.8	238	9.94		
TPH by SW8015 Mod	***Extracted:***	Aug-23-19 10:00		Aug-23-19 10:00		Aug-23-19 10:00		Aug-23-19 10:00			
	Analyzed:	Aug-23-19 17:50		Aug-23-19 18:11		Aug-23-19 18:31		Aug-23-19 18:51			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Gasoline Range Hydrocarbons (GRO)		<24.9	24.9	<25.1	25.1	<25.0	25.0	<25.1	25.1		
Diesel Range Organics (DRO)		140	24.9	<25.1	25.1	<25.0	25.0	<25.1	25.1		
Motor Oil Range Hydrocarbons (MRO)		<24.9	24.9	<25.1	25.1	<25.0	25.0	<25.1	25.1		
Total TPH		140	24.9	<25.1	25.1	<25.0	25.0	<25.1	25.1		
Total GRO-DRO		140	24.9	<25.1	25.1	<25.0	25.0	<25.1	25.1		

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Jessica Kramer
Project Assistant

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **FS01** Matrix: Soil Date Received: 08.20.19 12.50
Lab Sample Id: 634606-001 Date Collected: 08.15.19 10.40 Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 08.20.19 16.08 Basis: Wet Weight
Seq Number: 3099290

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**969**	20.0	mg/kg	08.20.19 21.19		2

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DTH % Moisture:
Analyst: DTH Date Prep: 08.20.19 14.49 Basis: Wet Weight
Seq Number: 3099052

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.2	25.2	mg/kg	08.20.19 22.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.2	25.2	mg/kg	08.20.19 22.13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.2	25.2	mg/kg	08.20.19 22.13	U	1
Total TPH	PHC635	<25.2	25.2	mg/kg	08.20.19 22.13	U	1
Total GRO-DRO	PHC628	<25.2	25.2	mg/kg	08.20.19 22.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	08.20.19 22.13	
o-Terphenyl	84-15-1	111	%	70-135	08.20.19 22.13	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **FS01**
Lab Sample Id: 634606-001

Matrix: Soil
Date Collected: 08.15.19 10.40

Date Received: 08.20.19 12.50
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B
Tech: DTH
Analyst: DTH
Seq Number: 3099039

Date Prep: 08.20.19 14.49

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	08.20.19 21.52	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	08.20.19 21.52	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	08.20.19 21.52	U	1
m,p-Xylenes	179601-23-1	<0.00202	0.00202	mg/kg	08.20.19 21.52	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	08.20.19 21.52	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	08.20.19 21.52	U	1
Total BTEX		<0.00101	0.00101	mg/kg	08.20.19 21.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	95	%	80-120	08.20.19 21.52	
4-Bromofluorobenzene	460-00-4	95	%	80-120	08.20.19 21.52	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **FS02** Matrix: Soil Date Received:08.20.19 12.50
Lab Sample Id: 634606-002 Date Collected: 08.15.19 10.45 Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 08.20.19 16.08 Basis: Wet Weight
Seq Number: 3099290

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**142**	10.0	mg/kg	08.20.19 21.26		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DTH % Moisture:
Analyst: DTH Date Prep: 08.20.19 14.49 Basis: Wet Weight
Seq Number: 3099052

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.1	25.1	mg/kg	08.20.19 22.33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.1	25.1	mg/kg	08.20.19 22.33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.1	25.1	mg/kg	08.20.19 22.33	U	1
Total TPH	PHC635	<25.1	25.1	mg/kg	08.20.19 22.33	U	1
Total GRO-DRO	PHC628	<25.1	25.1	mg/kg	08.20.19 22.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	08.20.19 22.33	
o-Terphenyl	84-15-1	111	%	70-135	08.20.19 22.33	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **FS02**
Lab Sample Id: 634606-002

Matrix: Soil
Date Collected: 08.15.19 10.45

Date Received: 08.20.19 12.50
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B
Tech: DTH
Analyst: DTH
Seq Number: 3099039

Date Prep: 08.20.19 14.49

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000990	0.000990	mg/kg	08.20.19 22.12	U	1
Toluene	108-88-3	<0.000990	0.000990	mg/kg	08.20.19 22.12	U	1
Ethylbenzene	100-41-4	<0.000990	0.000990	mg/kg	08.20.19 22.12	U	1
m,p-Xylenes	179601-23-1	<0.00198	0.00198	mg/kg	08.20.19 22.12	U	1
o-Xylene	95-47-6	<0.000990	0.000990	mg/kg	08.20.19 22.12	U	1
Total Xylenes	1330-20-7	<0.000990	0.000990	mg/kg	08.20.19 22.12	U	1
Total BTEX		<0.000990	0.000990	mg/kg	08.20.19 22.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	95	%	80-120	08.20.19 22.12	
1,4-Difluorobenzene	540-36-3	96	%	80-120	08.20.19 22.12	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **FS03** Matrix: Soil Date Received:08.20.19 12.50
Lab Sample Id: 634606-003 Date Collected: 08.15.19 10.50 Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 08.20.19 16.08 Basis: Wet Weight
Seq Number: 3099290

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**256**	10.1	mg/kg	08.20.19 21.32		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DTH % Moisture:
Analyst: DTH Date Prep: 08.20.19 14.49 Basis: Wet Weight
Seq Number: 3099052

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.1	25.1	mg/kg	08.20.19 22.54	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.1	25.1	mg/kg	08.20.19 22.54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.1	25.1	mg/kg	08.20.19 22.54	U	1
Total TPH	PHC635	<25.1	25.1	mg/kg	08.20.19 22.54	U	1
Total GRO-DRO	PHC628	<25.1	25.1	mg/kg	08.20.19 22.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	116	%	70-135	08.20.19 22.54	
o-Terphenyl	84-15-1	123	%	70-135	08.20.19 22.54	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **FS03**
Lab Sample Id: 634606-003

Matrix: Soil
Date Collected: 08.15.19 10.50

Date Received: 08.20.19 12.50
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B
Tech: DTH
Analyst: DTH
Seq Number: 3099039

Date Prep: 08.20.19 14.49

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000990	0.000990	mg/kg	08.20.19 22.32	U	1
Toluene	108-88-3	<0.000990	0.000990	mg/kg	08.20.19 22.32	U	1
Ethylbenzene	100-41-4	<0.000990	0.000990	mg/kg	08.20.19 22.32	U	1
m,p-Xylenes	179601-23-1	<0.00198	0.00198	mg/kg	08.20.19 22.32	U	1
o-Xylene	95-47-6	<0.000990	0.000990	mg/kg	08.20.19 22.32	U	1
Total Xylenes	1330-20-7	<0.000990	0.000990	mg/kg	08.20.19 22.32	U	1
Total BTEX		<0.000990	0.000990	mg/kg	08.20.19 22.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	125	%	80-120	08.20.19 22.32	**
1,4-Difluorobenzene	540-36-3	101	%	80-120	08.20.19 22.32	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **FS04** Matrix: Soil Date Received: 08.20.19 12.50
Lab Sample Id: 634606-004 Date Collected: 08.15.19 11.00 Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 08.20.19 16.08 Basis: Wet Weight
Seq Number: 3099290

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**176**	9.96	mg/kg	08.20.19 21.39		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DTH % Moisture:
Analyst: DTH Date Prep: 08.20.19 14.49 Basis: Wet Weight
Seq Number: 3099052

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	08.20.19 23.14	U	1
Diesel Range Organics (DRO)	C10C28DRO	<24.9	24.9	mg/kg	08.20.19 23.14	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	08.20.19 23.14	U	1
Total TPH	PHC635	<24.9	24.9	mg/kg	08.20.19 23.14	U	1
Total GRO-DRO	PHC628	<24.9	24.9	mg/kg	08.20.19 23.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	118	%	70-135	08.20.19 23.14	
o-Terphenyl	84-15-1	119	%	70-135	08.20.19 23.14	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **FS04**
Lab Sample Id: 634606-004

Matrix: Soil
Date Collected: 08.15.19 11.00

Date Received: 08.20.19 12.50
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B
Tech: DTH
Analyst: DTH
Seq Number: 3099039

Date Prep: 08.20.19 14.49

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000994	0.000994	mg/kg	08.20.19 22.51	U	1
Toluene	108-88-3	<0.000994	0.000994	mg/kg	08.20.19 22.51	U	1
Ethylbenzene	100-41-4	<0.000994	0.000994	mg/kg	08.20.19 22.51	U	1
m,p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	08.20.19 22.51	U	1
o-Xylene	95-47-6	<0.000994	0.000994	mg/kg	08.20.19 22.51	U	1
Total Xylenes	1330-20-7	<0.000994	0.000994	mg/kg	08.20.19 22.51	U	1
Total BTEX		<0.000994	0.000994	mg/kg	08.20.19 22.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	80-120	08.20.19 22.51	
1,4-Difluorobenzene	540-36-3	100	%	80-120	08.20.19 22.51	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **FS05** Matrix: Soil Date Received: 08.20.19 12.50
Lab Sample Id: 634606-005 Date Collected: 08.15.19 11.05 Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 08.20.19 16.08 Basis: Wet Weight
Seq Number: 3099290

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**196**	9.94	mg/kg	08.20.19 21.45		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DTH % Moisture:
Analyst: DTH Date Prep: 08.20.19 14.49 Basis: Wet Weight
Seq Number: 3099052

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	08.20.19 23.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	**29.2**	24.9	mg/kg	08.20.19 23.34		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	08.20.19 23.34	U	1
Total TPH	PHC635	**29.2**	24.9	mg/kg	08.20.19 23.34		1
Total GRO-DRO	PHC628	**29.2**	24.9	mg/kg	08.20.19 23.34		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	08.20.19 23.34	
o-Terphenyl	84-15-1	115	%	70-135	08.20.19 23.34	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **FS05**
Lab Sample Id: 634606-005

Matrix: Soil
Date Collected: 08.15.19 11.05

Date Received: 08.20.19 12.50
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B
Tech: DTH
Analyst: DTH
Seq Number: 3099039

Date Prep: 08.20.19 14.49

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000996	0.000996	mg/kg	08.20.19 23.11	U	1
Toluene	108-88-3	<0.000996	0.000996	mg/kg	08.20.19 23.11	U	1
Ethylbenzene	100-41-4	<0.000996	0.000996	mg/kg	08.20.19 23.11	U	1
m,p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	08.20.19 23.11	U	1
o-Xylene	95-47-6	<0.000996	0.000996	mg/kg	08.20.19 23.11	U	1
Total Xylenes	1330-20-7	<0.000996	0.000996	mg/kg	08.20.19 23.11	U	1
Total BTEX		<0.000996	0.000996	mg/kg	08.20.19 23.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	80-120	08.20.19 23.11	
4-Bromofluorobenzene	460-00-4	106	%	80-120	08.20.19 23.11	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **FS06** Matrix: Soil Date Received: 08.20.19 12.50
Lab Sample Id: 634606-006 Date Collected: 08.15.19 11.10 Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 08.20.19 16.08 Basis: Wet Weight
Seq Number: 3099290

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**51.8**	20.0	mg/kg	08.20.19 21.52		2

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DTH % Moisture:
Analyst: DTH Date Prep: 08.21.19 10.08 Basis: Wet Weight
Seq Number: 3099358

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.21.19 13.51	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.21.19 13.51	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.21.19 13.51	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.21.19 13.51	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.21.19 13.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-135	08.21.19 13.51	
o-Terphenyl	84-15-1	117	%	70-135	08.21.19 13.51	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **FS06**
Lab Sample Id: 634606-006

Matrix: Soil
Date Collected: 08.15.19 11.10

Date Received: 08.20.19 12.50
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B
Tech: DTH
Analyst: DTH
Seq Number: 3099361

Date Prep: 08.21.19 10.08

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000994	0.000994	mg/kg	08.21.19 12.01	U	1
Toluene	108-88-3	<0.000994	0.000994	mg/kg	08.21.19 12.01	U	1
Ethylbenzene	100-41-4	<0.000994	0.000994	mg/kg	08.21.19 12.01	U	1
m,p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	08.21.19 12.01	U	1
o-Xylene	95-47-6	<0.000994	0.000994	mg/kg	08.21.19 12.01	U	1
Total Xylenes	1330-20-7	<0.000994	0.000994	mg/kg	08.21.19 12.01	U	1
Total BTEX		<0.000994	0.000994	mg/kg	08.21.19 12.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	111	%	80-120	08.21.19 12.01	
1,4-Difluorobenzene	540-36-3	102	%	80-120	08.21.19 12.01	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **FS07**
Lab Sample Id: 634606-007

Matrix: Soil
Date Collected: 08.15.19 11.20

Date Received: 08.20.19 12.50
Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300
Tech: MAB
Analyst: MAB
Seq Number: 3099263

Date Prep: 08.21.19 10.08

Prep Method: E300P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**195**	9.94	mg/kg	08.21.19 20.24		1

Analytical Method: TPH by SW8015 Mod
Tech: DTH
Analyst: DTH
Seq Number: 3099358

Date Prep: 08.21.19 10.08

Prep Method: SW8015P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	08.21.19 15.00	U	1
Diesel Range Organics (DRO)	C10C28DRO	<24.9	24.9	mg/kg	08.21.19 15.00	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	08.21.19 15.00	U	1
Total TPH	PHC635	<24.9	24.9	mg/kg	08.21.19 15.00	U	1
Total GRO-DRO	PHC628	<24.9	24.9	mg/kg	08.21.19 15.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	08.21.19 15.00	
o-Terphenyl	84-15-1	111	%	70-135	08.21.19 15.00	

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LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **FS07**
Lab Sample Id: 634606-007

Matrix: Soil
Date Collected: 08.15.19 11.20

Date Received: 08.20.19 12.50
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B
Tech: DTH
Analyst: DTH
Seq Number: 3099361

Date Prep: 08.21.19 10.08

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000998	0.000998	mg/kg	08.21.19 13.20	U	1
Toluene	108-88-3	<0.000998	0.000998	mg/kg	08.21.19 13.20	U	1
Ethylbenzene	100-41-4	<0.000998	0.000998	mg/kg	08.21.19 13.20	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	08.21.19 13.20	U	1
o-Xylene	95-47-6	<0.000998	0.000998	mg/kg	08.21.19 13.20	U	1
Total Xylenes	1330-20-7	<0.000998	0.000998	mg/kg	08.21.19 13.20	U	1
Total BTEX		<0.000998	0.000998	mg/kg	08.21.19 13.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	80-120	08.21.19 13.20	
4-Bromofluorobenzene	460-00-4	116	%	80-120	08.21.19 13.20	

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LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **FS08**
Lab Sample Id: 634606-008

Matrix: Soil
Date Collected: 08.15.19 11.25

Date Received: 08.20.19 12.50
Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300
Tech: MAB
Analyst: MAB
Seq Number: 3099263

Date Prep: 08.21.19 10.08

Prep Method: E300P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**189**	10.0	mg/kg	08.21.19 20.43		1

Analytical Method: TPH by SW8015 Mod
Tech: DTH
Analyst: DTH
Seq Number: 3099358

Date Prep: 08.21.19 10.08

Prep Method: SW8015P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.1	25.1	mg/kg	08.21.19 15.20	U	1
Diesel Range Organics (DRO)	C10C28DRO	**83.7**	25.1	mg/kg	08.21.19 15.20		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.1	25.1	mg/kg	08.21.19 15.20	U	1
Total TPH	PHC635	**83.7**	25.1	mg/kg	08.21.19 15.20		1
Total GRO-DRO	PHC628	**83.7**	25.1	mg/kg	08.21.19 15.20		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	08.21.19 15.20	
o-Terphenyl	84-15-1	115	%	70-135	08.21.19 15.20	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **FS08**
Lab Sample Id: 634606-008

Matrix: Soil
Date Collected: 08.15.19 11.25

Date Received: 08.20.19 12.50
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B
Tech: DTH
Analyst: DTH
Seq Number: 3099361

Date Prep: 08.21.19 10.08

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	08.21.19 13.40	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	08.21.19 13.40	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	08.21.19 13.40	U	1
m,p-Xylenes	179601-23-1	<0.00202	0.00202	mg/kg	08.21.19 13.40	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	08.21.19 13.40	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	08.21.19 13.40	U	1
Total BTEX		<0.00101	0.00101	mg/kg	08.21.19 13.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	109	%	80-120	08.21.19 13.40	
1,4-Difluorobenzene	540-36-3	101	%	80-120	08.21.19 13.40	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **FS09** Matrix: Soil Date Received: 08.20.19 12.50
Lab Sample Id: 634606-009 Date Collected: 08.15.19 11.30 Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 08.21.19 10.08 Basis: Wet Weight
Seq Number: 3099263

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**237**	10.1	mg/kg	08.21.19 20.50		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DTH % Moisture:
Analyst: DTH Date Prep: 08.21.19 10.08 Basis: Wet Weight
Seq Number: 3099358

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.1	25.1	mg/kg	08.21.19 15.40	U	1
Diesel Range Organics (DRO)	C10C28DRO	**27.7**	25.1	mg/kg	08.21.19 15.40		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.1	25.1	mg/kg	08.21.19 15.40	U	1
Total TPH	PHC635	**27.7**	25.1	mg/kg	08.21.19 15.40		1
Total GRO-DRO	PHC628	**27.7**	25.1	mg/kg	08.21.19 15.40		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-135	08.21.19 15.40	
o-Terphenyl	84-15-1	120	%	70-135	08.21.19 15.40	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **FS09**
Lab Sample Id: 634606-009

Matrix: Soil
Date Collected: 08.15.19 11.30

Date Received: 08.20.19 12.50
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B
Tech: DTH
Analyst: DTH
Seq Number: 3099361

Date Prep: 08.21.19 10.08

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000998	0.000998	mg/kg	08.21.19 14.00	U	1
Toluene	108-88-3	<0.000998	0.000998	mg/kg	08.21.19 14.00	U	1
Ethylbenzene	100-41-4	<0.000998	0.000998	mg/kg	08.21.19 14.00	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	08.21.19 14.00	U	1
o-Xylene	95-47-6	<0.000998	0.000998	mg/kg	08.21.19 14.00	U	1
Total Xylenes	1330-20-7	<0.000998	0.000998	mg/kg	08.21.19 14.00	U	1
Total BTEX		<0.000998	0.000998	mg/kg	08.21.19 14.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	97	%	80-120	08.21.19 14.00	
4-Bromofluorobenzene	460-00-4	103	%	80-120	08.21.19 14.00	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **FS10** Matrix: Soil Date Received: 08.20.19 12.50
Lab Sample Id: 634606-010 Date Collected: 08.15.19 11.35 Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 08.21.19 10.08 Basis: Wet Weight
Seq Number: 3099263

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**74.0**	10.0	mg/kg	08.21.19 20.56		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DTH % Moisture:
Analyst: DTH Date Prep: 08.21.19 10.08 Basis: Wet Weight
Seq Number: 3099358

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.1	25.1	mg/kg	08.21.19 16.01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.1	25.1	mg/kg	08.21.19 16.01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.1	25.1	mg/kg	08.21.19 16.01	U	1
Total TPH	PHC635	<25.1	25.1	mg/kg	08.21.19 16.01	U	1
Total GRO-DRO	PHC628	<25.1	25.1	mg/kg	08.21.19 16.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	116	%	70-135	08.21.19 16.01	
o-Terphenyl	84-15-1	113	%	70-135	08.21.19 16.01	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id:	**FS10**	Matrix:	Soil	Date Received:	08.20.19 12.50
Lab Sample Id:	634606-010	Date Collected:	08.15.19 11.35	Sample Depth:	2 ft

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.21.19 10.08	Basis:	Wet Weight
Seq Number:	3099361				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	08.21.19 14.19	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	08.21.19 14.19	U	1
Ethylbenzene	100-41-4	**0.00224**	0.00101	mg/kg	08.21.19 14.19		1
m,p-Xylenes	179601-23-1	<0.00202	0.00202	mg/kg	08.21.19 14.19	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	08.21.19 14.19	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	08.21.19 14.19	U	1
Total BTEX		**0.00224**	0.00101	mg/kg	08.21.19 14.19		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	119	%	80-120	08.21.19 14.19	
1,4-Difluorobenzene	540-36-3	102	%	80-120	08.21.19 14.19	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **FS11** Matrix: Soil Date Received: 08.20.19 12.50
Lab Sample Id: 634606-011 Date Collected: 08.15.19 11.45 Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 08.21.19 10.08 Basis: Wet Weight
Seq Number: 3099263

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**350**	9.98	mg/kg	08.21.19 21.03		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DTH % Moisture:
Analyst: DTH Date Prep: 08.21.19 10.08 Basis: Wet Weight
Seq Number: 3099358

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	08.21.19 16.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<24.9	24.9	mg/kg	08.21.19 16.21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	08.21.19 16.21	U	1
Total TPH	PHC635	<24.9	24.9	mg/kg	08.21.19 16.21	U	1
Total GRO-DRO	PHC628	<24.9	24.9	mg/kg	08.21.19 16.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	08.21.19 16.21	
o-Terphenyl	84-15-1	111	%	70-135	08.21.19 16.21	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id:	**FS11**	Matrix:	Soil	Date Received:	08.20.19 12.50
Lab Sample Id:	634606-011	Date Collected:	08.15.19 11.45	Sample Depth:	2 ft

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.21.19 10.08	Basis:	Wet Weight
Seq Number:	3099361				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000994	0.000994	mg/kg	08.21.19 14.39	U	1
Toluene	108-88-3	<0.000994	0.000994	mg/kg	08.21.19 14.39	U	1
Ethylbenzene	100-41-4	<0.000994	0.000994	mg/kg	08.21.19 14.39	U	1
m,p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	08.21.19 14.39	U	1
o-Xylene	95-47-6	<0.000994	0.000994	mg/kg	08.21.19 14.39	U	1
Total Xylenes	1330-20-7	<0.000994	0.000994	mg/kg	08.21.19 14.39	U	1
Total BTEX		<0.000994	0.000994	mg/kg	08.21.19 14.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	80-120	08.21.19 14.39	
4-Bromofluorobenzene	460-00-4	110	%	80-120	08.21.19 14.39	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **FS12**
Lab Sample Id: 634606-012

Matrix: Soil
Date Collected: 08.15.19 11.55

Date Received: 08.20.19 12.50
Sample Depth: 3 ft

Analytical Method: Chloride by EPA 300
Tech: MAB
Analyst: MAB
Seq Number: 3099263

Date Prep: 08.21.19 10.08

Prep Method: E300P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**274**	10.0	mg/kg	08.21.19 21.23		1

Analytical Method: TPH by SW8015 Mod
Tech: DTH
Analyst: DTH
Seq Number: 3099358

Date Prep: 08.21.19 10.08

Prep Method: SW8015P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	08.21.19 16.42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<24.9	24.9	mg/kg	08.21.19 16.42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	08.21.19 16.42	U	1
Total TPH	PHC635	<24.9	24.9	mg/kg	08.21.19 16.42	U	1
Total GRO-DRO	PHC628	<24.9	24.9	mg/kg	08.21.19 16.42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	119	%	70-135	08.21.19 16.42	
o-Terphenyl	84-15-1	117	%	70-135	08.21.19 16.42	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **FS12**
Lab Sample Id: 634606-012

Matrix: Soil
Date Collected: 08.15.19 11.55

Date Received: 08.20.19 12.50
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B
Tech: DTH
Analyst: DTH
Seq Number: 3099361

Date Prep: 08.21.19 10.08

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000990	0.000990	mg/kg	08.21.19 14.58	U	1
Toluene	108-88-3	<0.000990	0.000990	mg/kg	08.21.19 14.58	U	1
Ethylbenzene	100-41-4	<0.000990	0.000990	mg/kg	08.21.19 14.58	U	1
m,p-Xylenes	179601-23-1	<0.00198	0.00198	mg/kg	08.21.19 14.58	U	1
o-Xylene	95-47-6	<0.000990	0.000990	mg/kg	08.21.19 14.58	U	1
Total Xylenes	1330-20-7	<0.000990	0.000990	mg/kg	08.21.19 14.58	U	1
Total BTEX		<0.000990	0.000990	mg/kg	08.21.19 14.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	80-120	08.21.19 14.58	
4-Bromofluorobenzene	460-00-4	117	%	80-120	08.21.19 14.58	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **SW01** Matrix: Soil Date Received: 08.20.19 12.50
Lab Sample Id: 634606-013 Date Collected: 08.15.19 12.05 Sample Depth: 0 - 1 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 08.21.19 10.08 Basis: Wet Weight
Seq Number: 3099263

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**723**	10.0	mg/kg	08.21.19 21.29		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DTH % Moisture:
Analyst: DTH Date Prep: 08.21.19 10.08 Basis: Wet Weight
Seq Number: 3099358

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.1	25.1	mg/kg	08.21.19 17.03	U	1
Diesel Range Organics (DRO)	C10C28DRO	**42.3**	25.1	mg/kg	08.21.19 17.03		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.1	25.1	mg/kg	08.21.19 17.03	U	1
Total TPH	PHC635	**42.3**	25.1	mg/kg	08.21.19 17.03		1
Total GRO-DRO	PHC628	**42.3**	25.1	mg/kg	08.21.19 17.03		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	08.21.19 17.03	
o-Terphenyl	84-15-1	112	%	70-135	08.21.19 17.03	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	08.20.19 12.50
Lab Sample Id:	634606-013	Date Collected:	08.15.19 12.05	Sample Depth:	0 - 1 ft

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.21.19 10.08	Basis:	Wet Weight
Seq Number:	3099361				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000998	0.000998	mg/kg	08.21.19 15.18	U	1
Toluene	108-88-3	<0.000998	0.000998	mg/kg	08.21.19 15.18	U	1
Ethylbenzene	100-41-4	<0.000998	0.000998	mg/kg	08.21.19 15.18	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	08.21.19 15.18	U	1
o-Xylene	95-47-6	<0.000998	0.000998	mg/kg	08.21.19 15.18	U	1
Total Xylenes	1330-20-7	<0.000998	0.000998	mg/kg	08.21.19 15.18	U	1
Total BTEX		<0.000998	0.000998	mg/kg	08.21.19 15.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	94	%	80-120	08.21.19 15.18	
4-Bromofluorobenzene	460-00-4	124	%	80-120	08.21.19 15.18	**

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **SW02** Matrix: Soil Date Received: 08.20.19 12.50
Lab Sample Id: 634606-014 Date Collected: 08.15.19 12.10 Sample Depth: 0 - 3 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 08.21.19 10.08 Basis: Wet Weight
Seq Number: 3099263

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**512**	10.0	mg/kg	08.21.19 21.36		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DTH % Moisture:
Analyst: DTH Date Prep: 08.21.19 10.08 Basis: Wet Weight
Seq Number: 3099358

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.1	25.1	mg/kg	08.21.19 17.24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.1	25.1	mg/kg	08.21.19 17.24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.1	25.1	mg/kg	08.21.19 17.24	U	1
Total TPH	PHC635	<25.1	25.1	mg/kg	08.21.19 17.24	U	1
Total GRO-DRO	PHC628	<25.1	25.1	mg/kg	08.21.19 17.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	08.21.19 17.24	
o-Terphenyl	84-15-1	110	%	70-135	08.21.19 17.24	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **SW02**
Lab Sample Id: 634606-014

Matrix: Soil
Date Collected: 08.15.19 12.10

Date Received: 08.20.19 12.50
Sample Depth: 0 - 3 ft

Analytical Method: BTEX by EPA 8021B
Tech: DTH
Analyst: DTH
Seq Number: 3099361

Date Prep: 08.21.19 10.08

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	08.21.19 15.38	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	08.21.19 15.38	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	08.21.19 15.38	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	08.21.19 15.38	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	08.21.19 15.38	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	08.21.19 15.38	U	1
Total BTEX		<0.00100	0.00100	mg/kg	08.21.19 15.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	111	%	80-120	08.21.19 15.38	
1,4-Difluorobenzene	540-36-3	96	%	80-120	08.21.19 15.38	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **FS13** Matrix: Soil Date Received: 08.20.19 12.50
Lab Sample Id: 634606-015 Date Collected: 08.15.19 12.20 Sample Depth: 3 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 08.21.19 10.08 Basis: Wet Weight
Seq Number: 3099263

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**319**	10.0	mg/kg	08.21.19 21.42		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DTH % Moisture:
Analyst: DTH Date Prep: 08.21.19 10.08 Basis: Wet Weight
Seq Number: 3099358

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.1	25.1	mg/kg	08.21.19 18.26	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.1	25.1	mg/kg	08.21.19 18.26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.1	25.1	mg/kg	08.21.19 18.26	U	1
Total TPH	PHC635	<25.1	25.1	mg/kg	08.21.19 18.26	U	1
Total GRO-DRO	PHC628	<25.1	25.1	mg/kg	08.21.19 18.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	08.21.19 18.26	
o-Terphenyl	84-15-1	111	%	70-135	08.21.19 18.26	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **FS13**
Lab Sample Id: 634606-015

Matrix: Soil
Date Collected: 08.15.19 12.20

Date Received: 08.20.19 12.50
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B
Tech: DTH
Analyst: DTH
Seq Number: 3099361

Date Prep: 08.21.19 10.08

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	08.21.19 16.58	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	08.21.19 16.58	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	08.21.19 16.58	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	08.21.19 16.58	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	08.21.19 16.58	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	08.21.19 16.58	U	1
Total BTEX		<0.00100	0.00100	mg/kg	08.21.19 16.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	85	%	80-120	08.21.19 16.58	
4-Bromofluorobenzene	460-00-4	118	%	80-120	08.21.19 16.58	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **SW03** Matrix: Soil Date Received: 08.20.19 12.50
Lab Sample Id: 634606-016 Date Collected: 08.15.19 12.30 Sample Depth: 0 - 7 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 08.21.19 10.08 Basis: Wet Weight
Seq Number: 3099263

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**504**	10.0	mg/kg	08.21.19 21.49		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DTH % Moisture:
Analyst: DTH Date Prep: 08.21.19 10.08 Basis: Wet Weight
Seq Number: 3099358

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.21.19 18.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	**50.1**	25.0	mg/kg	08.21.19 18.46		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.21.19 18.46	U	1
Total TPH	PHC635	**50.1**	25.0	mg/kg	08.21.19 18.46		1
Total GRO-DRO	PHC628	**50.1**	25.0	mg/kg	08.21.19 18.46		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	08.21.19 18.46	
o-Terphenyl	84-15-1	114	%	70-135	08.21.19 18.46	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	08.20.19 12.50
Lab Sample Id:	634606-016	Date Collected:	08.15.19 12.30	Sample Depth:	0 - 7 ft

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.22.19 09.08	Basis:	Wet Weight
Seq Number:	3099404				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	08.22.19 19.00	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	08.22.19 19.00	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	08.22.19 19.00	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	08.22.19 19.00	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	08.22.19 19.00	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	08.22.19 19.00	U	1
Total BTEX		<0.00100	0.00100	mg/kg	08.22.19 19.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	115	%	80-120	08.22.19 19.00	
1,4-Difluorobenzene	540-36-3	107	%	80-120	08.22.19 19.00	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **SW04** Matrix: Soil Date Received: 08.20.19 12.50
Lab Sample Id: 634606-017 Date Collected: 08.15.19 13.00 Sample Depth: 0 - 4 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 08.21.19 10.08 Basis: Wet Weight
Seq Number: 3099263

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**43.0**	9.90	mg/kg	08.21.19 21.55		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DTH % Moisture:
Analyst: DTH Date Prep: 08.21.19 10.08 Basis: Wet Weight
Seq Number: 3099358

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.21.19 19.07	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.21.19 19.07	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.21.19 19.07	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.21.19 19.07	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.21.19 19.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	08.21.19 19.07	
o-Terphenyl	84-15-1	100	%	70-135	08.21.19 19.07	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	08.20.19 12.50
Lab Sample Id:	634606-017	Date Collected:	08.15.19 13.00	Sample Depth:	0 - 4 ft

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.21.19 10.08	Basis:	Wet Weight
Seq Number:	3099361				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000998	0.000998	mg/kg	08.21.19 17.38	U	1
Toluene	108-88-3	<0.000998	0.000998	mg/kg	08.21.19 17.38	U	1
Ethylbenzene	100-41-4	<0.000998	0.000998	mg/kg	08.21.19 17.38	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	08.21.19 17.38	U	1
o-Xylene	95-47-6	<0.000998	0.000998	mg/kg	08.21.19 17.38	U	1
Total Xylenes	1330-20-7	<0.000998	0.000998	mg/kg	08.21.19 17.38	U	1
Total BTEX		<0.000998	0.000998	mg/kg	08.21.19 17.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	115	%	80-120	08.21.19 17.38	
1,4-Difluorobenzene	540-36-3	103	%	80-120	08.21.19 17.38	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **FS14** Matrix: Soil Date Received: 08.20.19 12.50
Lab Sample Id: 634606-018 Date Collected: 08.15.19 13.20 Sample Depth: 3 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 08.21.19 10.08 Basis: Wet Weight
Seq Number: 3099263

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**38.2**	9.84	mg/kg	08.21.19 22.15		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DTH % Moisture:
Analyst: DTH Date Prep: 08.21.19 10.08 Basis: Wet Weight
Seq Number: 3099358

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.21.19 19.27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.21.19 19.27	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.21.19 19.27	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.21.19 19.27	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.21.19 19.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	08.21.19 19.27	
o-Terphenyl	84-15-1	101	%	70-135	08.21.19 19.27	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **FS14**
Lab Sample Id: 634606-018

Matrix: Soil
Date Collected: 08.15.19 13.20

Date Received: 08.20.19 12.50
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B
Tech: DTH
Analyst: DTH
Seq Number: 3099404

Date Prep: 08.22.19 09.08

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000996	0.000996	mg/kg	08.22.19 19.20	U	1
Toluene	108-88-3	<0.000996	0.000996	mg/kg	08.22.19 19.20	U	1
Ethylbenzene	100-41-4	<0.000996	0.000996	mg/kg	08.22.19 19.20	U	1
m,p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	08.22.19 19.20	U	1
o-Xylene	95-47-6	<0.000996	0.000996	mg/kg	08.22.19 19.20	U	1
Total Xylenes	1330-20-7	<0.000996	0.000996	mg/kg	08.22.19 19.20	U	1
Total BTEX		<0.000996	0.000996	mg/kg	08.22.19 19.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	120	%	80-120	08.22.19 19.20	
1,4-Difluorobenzene	540-36-3	107	%	80-120	08.22.19 19.20	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **FS15** Matrix: Soil Date Received:08.20.19 12.50
Lab Sample Id: 634606-019 Date Collected: 08.15.19 14.15 Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 08.21.19 10.08 Basis: Wet Weight
Seq Number: 3099263

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**183**	10.0	mg/kg	08.21.19 22.22		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DTH % Moisture:
Analyst: DTH Date Prep: 08.21.19 10.08 Basis: Wet Weight
Seq Number: 3099358

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.1	25.1	mg/kg	08.21.19 19.48	U	1
Diesel Range Organics (DRO)	C10C28DRO	**152**	25.1	mg/kg	08.21.19 19.48		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.1	25.1	mg/kg	08.21.19 19.48	U	1
Total TPH	PHC635	**152**	25.1	mg/kg	08.21.19 19.48		1
Total GRO-DRO	PHC628	**152**	25.1	mg/kg	08.21.19 19.48		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	08.21.19 19.48	
o-Terphenyl	84-15-1	116	%	70-135	08.21.19 19.48	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **FS15**
Lab Sample Id: 634606-019

Matrix: Soil
Date Collected: 08.15.19 14.15

Date Received: 08.20.19 12.50
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B
Tech: DTH
Analyst: DTH
Seq Number: 3099361

Date Prep: 08.21.19 10.08

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	08.21.19 18.17	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	08.21.19 18.17	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	08.21.19 18.17	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	08.21.19 18.17	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	08.21.19 18.17	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	08.21.19 18.17	U	1
Total BTEX		<0.00100	0.00100	mg/kg	08.21.19 18.17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	80-120	08.21.19 18.17	
1,4-Difluorobenzene	540-36-3	96	%	80-120	08.21.19 18.17	

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LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **FS16** Matrix: Soil Date Received: 08.20.19 12.50
Lab Sample Id: 634606-020 Date Collected: 08.15.19 14.25 Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 08.21.19 10.08 Basis: Wet Weight
Seq Number: 3099263

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**161**	9.82	mg/kg	08.21.19 22.28		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DTH % Moisture:
Analyst: DTH Date Prep: 08.21.19 10.08 Basis: Wet Weight
Seq Number: 3099358

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.21.19 20.08	U	1
Diesel Range Organics (DRO)	C10C28DRO	**586**	25.0	mg/kg	08.21.19 20.08		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.21.19 20.08	U	1
Total TPH	PHC635	**586**	25.0	mg/kg	08.21.19 20.08		1
Total GRO-DRO	PHC628	**586**	25.0	mg/kg	08.21.19 20.08		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	08.21.19 20.08	
o-Terphenyl	84-15-1	128	%	70-135	08.21.19 20.08	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id:	**FS16**	Matrix:	Soil	Date Received:	08.20.19 12.50
Lab Sample Id:	634606-020	Date Collected:	08.15.19 14.25	Sample Depth:	4 ft

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.22.19 09.08	Basis:	Wet Weight
Seq Number:	3099404				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000994	0.000994	mg/kg	08.22.19 19.40	U	1
Toluene	108-88-3	<0.000994	0.000994	mg/kg	08.22.19 19.40	U	1
Ethylbenzene	100-41-4	**0.00243**	0.000994	mg/kg	08.22.19 19.40		1
m,p-Xylenes	179601-23-1	**0.0255**	0.00199	mg/kg	08.22.19 19.40		1
o-Xylene	95-47-6	**0.0104**	0.000994	mg/kg	08.22.19 19.40		1
Total Xylenes	1330-20-7	**0.0359**	0.000994	mg/kg	08.22.19 19.40		1
Total BTEX		**0.0383**	0.000994	mg/kg	08.22.19 19.40		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	155	%	80-120	08.22.19 19.40	**
1,4-Difluorobenzene	540-36-3	113	%	80-120	08.22.19 19.40	

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LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **FS17**
Lab Sample Id: 634606-021

Matrix: Soil
Date Collected: 08.15.19 14.35

Date Received: 08.20.19 12.50
Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300
Tech: MAB
Analyst: MAB
Seq Number: 3099263

Date Prep: 08.21.19 10.08

Prep Method: E300P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**187**	49.7	mg/kg	08.21.19 22.48		5

Analytical Method: TPH by SW8015 Mod
Tech: DTH
Analyst: DTH
Seq Number: 3099358

Date Prep: 08.21.19 10.08

Prep Method: SW8015P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	08.21.19 20.28	U	1
Diesel Range Organics (DRO)	C10C28DRO	**57.6**	24.9	mg/kg	08.21.19 20.28		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	08.21.19 20.28	U	1
Total TPH	PHC635	**57.6**	24.9	mg/kg	08.21.19 20.28		1
Total GRO-DRO	PHC628	**57.6**	24.9	mg/kg	08.21.19 20.28		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	08.21.19 20.28	
o-Terphenyl	84-15-1	112	%	70-135	08.21.19 20.28	

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LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id:	**FS17**	Matrix:	Soil	Date Received:	08.20.19 12.50
Lab Sample Id:	634606-021	Date Collected:	08.15.19 14.35	Sample Depth:	4 ft

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.21.19 10.08	Basis:	Wet Weight
Seq Number:	3099361				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	08.21.19 18.57	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	08.21.19 18.57	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	08.21.19 18.57	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	08.21.19 18.57	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	08.21.19 18.57	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	08.21.19 18.57	U	1
Total BTEX		<0.00100	0.00100	mg/kg	08.21.19 18.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	107	%	80-120	08.21.19 18.57	
1,4-Difluorobenzene	540-36-3	109	%	80-120	08.21.19 18.57	

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LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **FS18** Matrix: Soil Date Received: 08.20.19 12.50
Lab Sample Id: 634606-022 Date Collected: 08.15.19 14.45 Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 08.21.19 10.08 Basis: Wet Weight
Seq Number: 3099263

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**633**	49.8	mg/kg	08.21.19 22.54		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DTH % Moisture:
Analyst: DTH Date Prep: 08.21.19 10.08 Basis: Wet Weight
Seq Number: 3099358

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	08.21.19 20.49	U	1
Diesel Range Organics (DRO)	C10C28DRO	**59.0**	24.9	mg/kg	08.21.19 20.49		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	08.21.19 20.49	U	1
Total TPH	PHC635	**59.0**	24.9	mg/kg	08.21.19 20.49		1
Total GRO-DRO	PHC628	**59.0**	24.9	mg/kg	08.21.19 20.49		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	120	%	70-135	08.21.19 20.49	
o-Terphenyl	84-15-1	125	%	70-135	08.21.19 20.49	

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LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **FS18**
Lab Sample Id: 634606-022

Matrix: Soil
Date Collected: 08.15.19 14.45

Date Received: 08.20.19 12.50
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B
Tech: DTH
Analyst: DTH
Seq Number: 3099361

Date Prep: 08.21.19 10.08

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000998	0.000998	mg/kg	08.21.19 19.17	U	1
Toluene	108-88-3	<0.000998	0.000998	mg/kg	08.21.19 19.17	U	1
Ethylbenzene	100-41-4	<0.000998	0.000998	mg/kg	08.21.19 19.17	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	08.21.19 19.17	U	1
o-Xylene	95-47-6	<0.000998	0.000998	mg/kg	08.21.19 19.17	U	1
Total Xylenes	1330-20-7	<0.000998	0.000998	mg/kg	08.21.19 19.17	U	1
Total BTEX		<0.000998	0.000998	mg/kg	08.21.19 19.17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	80-120	08.21.19 19.17	
4-Bromofluorobenzene	460-00-4	110	%	80-120	08.21.19 19.17	

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LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **FS19** Matrix: Soil Date Received: 08.20.19 12.50
Lab Sample Id: 634606-023 Date Collected: 08.15.19 14.55 Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 08.21.19 10.08 Basis: Wet Weight
Seq Number: 3099263

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1150**	99.8	mg/kg	08.21.19 23.01		10

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DTH % Moisture:
Analyst: DTH Date Prep: 08.21.19 10.08 Basis: Wet Weight
Seq Number: 3099358

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.1	25.1	mg/kg	08.21.19 21.09	U	1
Diesel Range Organics (DRO)	C10C28DRO	**42.2**	25.1	mg/kg	08.21.19 21.09		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.1	25.1	mg/kg	08.21.19 21.09	U	1
Total TPH	PHC635	**42.2**	25.1	mg/kg	08.21.19 21.09		1
Total GRO-DRO	PHC628	**42.2**	25.1	mg/kg	08.21.19 21.09		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	08.21.19 21.09	
o-Terphenyl	84-15-1	102	%	70-135	08.21.19 21.09	

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LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **FS19**
Lab Sample Id: 634606-023

Matrix: Soil
Date Collected: 08.15.19 14.55

Date Received: 08.20.19 12.50
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B
Tech: DTH
Analyst: DTH
Seq Number: 3099361

Date Prep: 08.21.19 10.08

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	08.21.19 19.37	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	08.21.19 19.37	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	08.21.19 19.37	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	08.21.19 19.37	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	08.21.19 19.37	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	08.21.19 19.37	U	1
Total BTEX		<0.00100	0.00100	mg/kg	08.21.19 19.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	80-120	08.21.19 19.37	
4-Bromofluorobenzene	460-00-4	108	%	80-120	08.21.19 19.37	

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LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **FS20** Matrix: Soil Date Received: 08.20.19 12.50
Lab Sample Id: 634606-024 Date Collected: 08.15.19 15.10 Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 08.21.19 10.08 Basis: Wet Weight
Seq Number: 3099263

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1410**	50.0	mg/kg	08.21.19 23.08		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DTH % Moisture:
Analyst: DTH Date Prep: 08.21.19 10.08 Basis: Wet Weight
Seq Number: 3099358

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.1	25.1	mg/kg	08.21.19 21.29	U	1
Diesel Range Organics (DRO)	C10C28DRO	**190**	25.1	mg/kg	08.21.19 21.29		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.1	25.1	mg/kg	08.21.19 21.29	U	1
Total TPH	PHC635	**190**	25.1	mg/kg	08.21.19 21.29		1
Total GRO-DRO	PHC628	**190**	25.1	mg/kg	08.21.19 21.29		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	08.21.19 21.29	
o-Terphenyl	84-15-1	107	%	70-135	08.21.19 21.29	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id:	**FS20**	Matrix:	Soil	Date Received:	08.20.19 12.50
Lab Sample Id:	634606-024	Date Collected:	08.15.19 15.10	Sample Depth:	4 ft

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.22.19 09.08	Basis:	Wet Weight
Seq Number:	3099404				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	08.22.19 20.00	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	08.22.19 20.00	U	1
Ethylbenzene	100-41-4	**0.00148**	0.00100	mg/kg	08.22.19 20.00		1
m,p-Xylenes	179601-23-1	**0.0104**	0.00200	mg/kg	08.22.19 20.00		1
o-Xylene	95-47-6	**0.00791**	0.00100	mg/kg	08.22.19 20.00		1
Total Xylenes	1330-20-7	**0.0183**	0.00100	mg/kg	08.22.19 20.00		1
Total BTEX		**0.0198**	0.00100	mg/kg	08.22.19 20.00		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	129	%	80-120	08.22.19 20.00	**
1,4-Difluorobenzene	540-36-3	116	%	80-120	08.22.19 20.00	

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LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **FS21** Matrix: Soil Date Received: 08.20.19 12.50
Lab Sample Id: 634606-025 Date Collected: 08.15.19 15.20 Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 08.21.19 10.08 Basis: Wet Weight
Seq Number: 3099263

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**767**	49.8	mg/kg	08.21.19 23.14		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DTH % Moisture:
Analyst: DTH Date Prep: 08.22.19 09.30 Basis: Wet Weight
Seq Number: 3099498

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**901**	25.0	mg/kg	08.22.19 12.06		1
Diesel Range Organics (DRO)	C10C28DRO	**1170**	25.0	mg/kg	08.22.19 12.06		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.22.19 12.06	U	1
Total TPH	PHC635	**2070**	25.0	mg/kg	08.22.19 12.06		1
Total GRO-DRO	PHC628	**2070**	25.0	mg/kg	08.22.19 12.06		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	116	%	70-135	08.22.19 12.06	
o-Terphenyl	84-15-1	116	%	70-135	08.22.19 12.06	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id:	**FS21**	Matrix:	Soil	Date Received:	08.20.19 12.50
Lab Sample Id:	634606-025	Date Collected:	08.15.19 15.20	Sample Depth:	4 ft

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.22.19 09.08	Basis:	Wet Weight
Seq Number:	3099404				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000996	0.000996	mg/kg	08.22.19 11.10	U	1
Toluene	108-88-3	<0.000996	0.000996	mg/kg	08.22.19 11.10	U	1
Ethylbenzene	100-41-4	**0.00117**	0.000996	mg/kg	08.22.19 11.10		1
m,p-Xylenes	179601-23-1	**0.00576**	0.00199	mg/kg	08.22.19 11.10		1
o-Xylene	95-47-6	**0.00533**	0.000996	mg/kg	08.22.19 11.10		1
Total Xylenes	1330-20-7	**0.0111**	0.000996	mg/kg	08.22.19 11.10		1
Total BTEX		**0.0123**	0.000996	mg/kg	08.22.19 11.10		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	118	%	80-120	08.22.19 11.10	
1,4-Difluorobenzene	540-36-3	104	%	80-120	08.22.19 11.10	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **FS22**
Lab Sample Id: 634606-026

Matrix: Soil
Date Collected: 08.19.19 12.00

Date Received: 08.20.19 12.50
Sample Depth: 5 ft

Analytical Method: Chloride by EPA 300
Tech: MAB
Analyst: MAB
Seq Number: 3099263

Date Prep: 08.21.19 10.08

Prep Method: E300P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**3820**	99.8	mg/kg	08.22.19 23.42		10

Analytical Method: TPH by SW8015 Mod
Tech: DTH
Analyst: DTH
Seq Number: 3099498

Date Prep: 08.22.19 09.30

Prep Method: SW8015P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.22.19 13.09	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.22.19 13.09	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.22.19 13.09	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.22.19 13.09	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.22.19 13.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	08.22.19 13.09	
o-Terphenyl	84-15-1	89	%	70-135	08.22.19 13.09	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **FS22**
Lab Sample Id: 634606-026

Matrix: Soil
Date Collected: 08.19.19 12.00

Date Received: 08.20.19 12.50
Sample Depth: 5 ft

Analytical Method: BTEX by EPA 8021B
Tech: DTH
Analyst: DTH
Seq Number: 3099404

Date Prep: 08.22.19 09.08

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	08.22.19 11.29	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	08.22.19 11.29	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	08.22.19 11.29	U	1
m,p-Xylenes	179601-23-1	<0.00201	0.00201	mg/kg	08.22.19 11.29	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	08.22.19 11.29	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	08.22.19 11.29	U	1
Total BTEX		<0.00101	0.00101	mg/kg	08.22.19 11.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	112	%	80-120	08.22.19 11.29	
1,4-Difluorobenzene	540-36-3	99	%	80-120	08.22.19 11.29	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **FS23** Matrix: Soil Date Received: 08.20.19 12.50
Lab Sample Id: 634606-027 Date Collected: 08.19.19 12.10 Sample Depth: 5 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 08.21.19 10.08 Basis: Wet Weight
Seq Number: 3099406

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1450**	99.4	mg/kg	08.22.19 09.48		10

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DTH % Moisture:
Analyst: DTH Date Prep: 08.22.19 09.30 Basis: Wet Weight
Seq Number: 3099498

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.22.19 13.29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.22.19 13.29	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.22.19 13.29	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.22.19 13.29	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.22.19 13.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	08.22.19 13.29	
o-Terphenyl	84-15-1	91	%	70-135	08.22.19 13.29	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **FS23**
Lab Sample Id: 634606-027

Matrix: Soil
Date Collected: 08.19.19 12.10

Date Received: 08.20.19 12.50
Sample Depth: 5 ft

Analytical Method: BTEX by EPA 8021B
Tech: DTH
Analyst: DTH
Seq Number: 3099404

Date Prep: 08.22.19 09.08

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000994	0.000994	mg/kg	08.22.19 11.49	U	1
Toluene	108-88-3	<0.000994	0.000994	mg/kg	08.22.19 11.49	U	1
Ethylbenzene	100-41-4	<0.000994	0.000994	mg/kg	08.22.19 11.49	U	1
m,p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	08.22.19 11.49	U	1
o-Xylene	95-47-6	<0.000994	0.000994	mg/kg	08.22.19 11.49	U	1
Total Xylenes	1330-20-7	<0.000994	0.000994	mg/kg	08.22.19 11.49	U	1
Total BTEX		<0.000994	0.000994	mg/kg	08.22.19 11.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	80-120	08.22.19 11.49	
4-Bromofluorobenzene	460-00-4	120	%	80-120	08.22.19 11.49	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **FS24** Matrix: Soil Date Received: 08.20.19 12.50
Lab Sample Id: 634606-028 Date Collected: 08.19.19 12.15 Sample Depth: 5 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 08.21.19 10.08 Basis: Wet Weight
Seq Number: 3099406

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2240**	99.8	mg/kg	08.22.19 10.07		10

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DTH % Moisture:
Analyst: DTH Date Prep: 08.22.19 09.30 Basis: Wet Weight
Seq Number: 3099498

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.22.19 13.49	U	1
Diesel Range Organics (DRO)	C10C28DRO	**319**	25.0	mg/kg	08.22.19 13.49		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.22.19 13.49	U	1
Total TPH	PHC635	**319**	25.0	mg/kg	08.22.19 13.49		1
Total GRO-DRO	PHC628	**319**	25.0	mg/kg	08.22.19 13.49		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	08.22.19 13.49	
o-Terphenyl	84-15-1	101	%	70-135	08.22.19 13.49	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **FS24**
Lab Sample Id: 634606-028

Matrix: Soil
Date Collected: 08.19.19 12.15

Date Received: 08.20.19 12.50
Sample Depth: 5 ft

Analytical Method: BTEX by EPA 8021B
Tech: DTH
Analyst: DTH
Seq Number: 3099404

Date Prep: 08.22.19 09.08

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	08.22.19 12.09	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	08.22.19 12.09	U	1
Ethylbenzene	100-41-4	**0.00341**	0.00100	mg/kg	08.22.19 12.09		1
m,p-Xylenes	179601-23-1	**0.0260**	0.00200	mg/kg	08.22.19 12.09		1
o-Xylene	95-47-6	**0.0183**	0.00100	mg/kg	08.22.19 12.09		1
Total Xylenes	1330-20-7	**0.0443**	0.00100	mg/kg	08.22.19 12.09		1
Total BTEX		**0.0477**	0.00100	mg/kg	08.22.19 12.09		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	118	%	80-120	08.22.19 12.09	
1,4-Difluorobenzene	540-36-3	105	%	80-120	08.22.19 12.09	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **FS25** Matrix: Soil Date Received: 08.20.19 12.50
Lab Sample Id: 634606-029 Date Collected: 08.19.19 13.10 Sample Depth: 5 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 08.21.19 10.08 Basis: Wet Weight
Seq Number: 3099406

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1050**	49.7	mg/kg	08.22.19 10.13		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DTH % Moisture:
Analyst: DTH Date Prep: 08.22.19 09.30 Basis: Wet Weight
Seq Number: 3099498

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.22.19 14.09	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.22.19 14.09	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.22.19 14.09	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.22.19 14.09	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.22.19 14.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	08.22.19 14.09	
o-Terphenyl	84-15-1	101	%	70-135	08.22.19 14.09	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **FS25**
Lab Sample Id: 634606-029

Matrix: Soil
Date Collected: 08.19.19 13.10

Date Received: 08.20.19 12.50
Sample Depth: 5 ft

Analytical Method: BTEX by EPA 8021B
Tech: DTH
Analyst: DTH
Seq Number: 3099404

Date Prep: 08.22.19 09.08

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000992	0.000992	mg/kg	08.22.19 12.29	U	1
Toluene	108-88-3	<0.000992	0.000992	mg/kg	08.22.19 12.29	U	1
Ethylbenzene	100-41-4	<0.000992	0.000992	mg/kg	08.22.19 12.29	U	1
m,p-Xylenes	179601-23-1	<0.00198	0.00198	mg/kg	08.22.19 12.29	U	1
o-Xylene	95-47-6	<0.000992	0.000992	mg/kg	08.22.19 12.29	U	1
Total Xylenes	1330-20-7	<0.000992	0.000992	mg/kg	08.22.19 12.29	U	1
Total BTEX		<0.000992	0.000992	mg/kg	08.22.19 12.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	119	%	80-120	08.22.19 12.29	
1,4-Difluorobenzene	540-36-3	100	%	80-120	08.22.19 12.29	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id:	**FS26**	Matrix:	Soil	Date Received:	08.20.19 12.50
Lab Sample Id:	634606-030	Date Collected:	08.19.19 13.15	Sample Depth:	6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.21.19 10.08	Basis:	Wet Weight
Seq Number:	3099406				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**127**	9.98	mg/kg	08.22.19 10.19		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.22.19 09.30	Basis:	Wet Weight
Seq Number:	3099498				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	08.22.19 14.29	U	1
Diesel Range Organics (DRO)	C10C28DRO	**146**	24.9	mg/kg	08.22.19 14.29		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	08.22.19 14.29	U	1
Total TPH	PHC635	**146**	24.9	mg/kg	08.22.19 14.29		1
Total GRO-DRO	PHC628	**146**	24.9	mg/kg	08.22.19 14.29		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	08.22.19 14.29	
o-Terphenyl	84-15-1	110	%	70-135	08.22.19 14.29	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **FS26**
Lab Sample Id: 634606-030

Matrix: Soil
Date Collected: 08.19.19 13.15

Date Received: 08.20.19 12.50
Sample Depth: 6 ft

Analytical Method: BTEX by EPA 8021B
Tech: DTH
Analyst: DTH
Seq Number: 3099404

Date Prep: 08.22.19 09.08

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000990	0.000990	mg/kg	08.22.19 12.49	U	1
Toluene	108-88-3	<0.000990	0.000990	mg/kg	08.22.19 12.49	U	1
Ethylbenzene	100-41-4	<0.000990	0.000990	mg/kg	08.22.19 12.49	U	1
m,p-Xylenes	179601-23-1	<0.00198	0.00198	mg/kg	08.22.19 12.49	U	1
o-Xylene	95-47-6	<0.000990	0.000990	mg/kg	08.22.19 12.49	U	1
Total Xylenes	1330-20-7	<0.000990	0.000990	mg/kg	08.22.19 12.49	U	1
Total BTEX		<0.000990	0.000990	mg/kg	08.22.19 12.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	119	%	80-120	08.22.19 12.49	
1,4-Difluorobenzene	540-36-3	104	%	80-120	08.22.19 12.49	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **FS27** Matrix: Soil Date Received: 08.20.19 12.50
Lab Sample Id: 634606-031 Date Collected: 08.19.19 13.25 Sample Depth: 7 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 08.21.19 10.08 Basis: Wet Weight
Seq Number: 3099406

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**66.5**	10.0	mg/kg	08.22.19 11.03		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DTH % Moisture:
Analyst: DTH Date Prep: 08.23.19 10.00 Basis: Wet Weight
Seq Number: 3099584

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	08.23.19 13.30	U	1
Diesel Range Organics (DRO)	C10C28DRO	<24.9	24.9	mg/kg	08.23.19 13.30	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	08.23.19 13.30	U	1
Total TPH	PHC635	<24.9	24.9	mg/kg	08.23.19 13.30	U	1
Total GRO-DRO	PHC628	<24.9	24.9	mg/kg	08.23.19 13.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	08.23.19 13.30	
o-Terphenyl	84-15-1	103	%	70-135	08.23.19 13.30	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **FS27**
Lab Sample Id: 634606-031

Matrix: Soil
Date Collected: 08.19.19 13.25

Date Received: 08.20.19 12.50
Sample Depth: 7 ft

Analytical Method: BTEX by EPA 8021B
Tech: DTH
Analyst: DTH
Seq Number: 3099404

Date Prep: 08.22.19 09.08

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000996	0.000996	mg/kg	08.22.19 13.08	U	1
Toluene	108-88-3	<0.000996	0.000996	mg/kg	08.22.19 13.08	U	1
Ethylbenzene	100-41-4	<0.000996	0.000996	mg/kg	08.22.19 13.08	U	1
m,p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	08.22.19 13.08	U	1
o-Xylene	95-47-6	<0.000996	0.000996	mg/kg	08.22.19 13.08	U	1
Total Xylenes	1330-20-7	<0.000996	0.000996	mg/kg	08.22.19 13.08	U	1
Total BTEX		<0.000996	0.000996	mg/kg	08.22.19 13.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	111	%	80-120	08.22.19 13.08	
4-Bromofluorobenzene	460-00-4	120	%	80-120	08.22.19 13.08	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **SW05** Matrix: Soil Date Received: 08.20.19 12.50
Lab Sample Id: 634606-032 Date Collected: 08.19.19 13.30 Sample Depth: 0 - 5 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 08.21.19 10.08 Basis: Wet Weight
Seq Number: 3099406

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**188**	10.0	mg/kg	08.22.19 11.09		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DTH % Moisture:
Analyst: DTH Date Prep: 08.23.19 10.00 Basis: Wet Weight
Seq Number: 3099584

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**615**	25.0	mg/kg	08.23.19 13.50		1
Diesel Range Organics (DRO)	C10C28DRO	**3810**	25.0	mg/kg	08.23.19 13.50		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.23.19 13.50	U	1
Total TPH	PHC635	**4430**	25.0	mg/kg	08.23.19 13.50		1
Total GRO-DRO	PHC628	**4430**	25.0	mg/kg	08.23.19 13.50		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	128	%	70-135	08.23.19 13.50	
o-Terphenyl	84-15-1	156	%	70-135	08.23.19 13.50	**

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id:	**SW05**	Matrix:	Soil	Date Received:	08.20.19 12.50
Lab Sample Id:	634606-032	Date Collected:	08.19.19 13.30	Sample Depth:	0 - 5 ft

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	CAC	Date Prep:	08.23.19 14.08	Basis:	Wet Weight
Seq Number:	3099530				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.500	0.500	mg/kg	08.24.19 16.13	U	500
Toluene	108-88-3	**2.08**	0.500	mg/kg	08.24.19 16.13		500
Ethylbenzene	100-41-4	**2.60**	0.500	mg/kg	08.24.19 16.13		500
m,p-Xylenes	179601-23-1	**19.3**	1.00	mg/kg	08.24.19 16.13		500
o-Xylene	95-47-6	**9.06**	0.500	mg/kg	08.24.19 16.13		500
Total Xylenes	1330-20-7	**28.4**	0.500	mg/kg	08.24.19 16.13		500
Total BTEX		**33.0**	0.500	mg/kg	08.24.19 16.13		500

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	80-120	08.24.19 16.13	
4-Bromofluorobenzene	460-00-4	139	%	80-120	08.24.19 16.13	**

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **SW06** Matrix: Soil Date Received: 08.20.19 12.50
Lab Sample Id: 634606-033 Date Collected: 08.19.19 13.45 Sample Depth: 0 - 5 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 08.21.19 10.08 Basis: Wet Weight
Seq Number: 3099406

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**56.7**	10.0	mg/kg	08.22.19 11.16		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DTH % Moisture:
Analyst: DTH Date Prep: 08.23.19 10.00 Basis: Wet Weight
Seq Number: 3099584

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	08.23.19 14.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<24.9	24.9	mg/kg	08.23.19 14.10	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	08.23.19 14.10	U	1
Total TPH	PHC635	<24.9	24.9	mg/kg	08.23.19 14.10	U	1
Total GRO-DRO	PHC628	<24.9	24.9	mg/kg	08.23.19 14.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	08.23.19 14.10	
o-Terphenyl	84-15-1	84	%	70-135	08.23.19 14.10	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id:	**SW06**	Matrix:	Soil	Date Received:	08.20.19 12.50
Lab Sample Id:	634606-033	Date Collected:	08.19.19 13.45	Sample Depth:	0 - 5 ft

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	CAC	Date Prep:	08.23.19 14.08	Basis:	Wet Weight
Seq Number:	3099530				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	08.24.19 15.33	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	08.24.19 15.33	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	08.24.19 15.33	U	1
m,p-Xylenes	179601-23-1	<0.00201	0.00201	mg/kg	08.24.19 15.33	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	08.24.19 15.33	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	08.24.19 15.33	U	1
Total BTEX		<0.00100	0.00100	mg/kg	08.24.19 15.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	107	%	80-120	08.24.19 15.33	
1,4-Difluorobenzene	540-36-3	104	%	80-120	08.24.19 15.33	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **FS28**
Lab Sample Id: 634606-034

Matrix: Soil
Date Collected: 08.19.19 13.55

Date Received: 08.20.19 12.50
Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300
Tech: MAB
Analyst: MAB
Seq Number: 3099406

Date Prep: 08.21.19 10.08

Prep Method: E300P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**894**	49.4	mg/kg	08.22.19 11.22		5

Analytical Method: TPH by SW8015 Mod
Tech: DTH
Analyst: DTH
Seq Number: 3099584

Date Prep: 08.23.19 10.00

Prep Method: SW8015P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.23.19 14.30	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.23.19 14.30	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.23.19 14.30	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.23.19 14.30	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.23.19 14.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	08.23.19 14.30	
o-Terphenyl	84-15-1	99	%	70-135	08.23.19 14.30	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **FS28**
Lab Sample Id: 634606-034

Matrix: Soil
Date Collected: 08.19.19 13.55

Date Received: 08.20.19 12.50
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B
Tech: MAB
Analyst: CAC
Seq Number: 3099530

Date Prep: 08.23.19 14.08

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	08.24.19 15.53	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	08.24.19 15.53	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	08.24.19 15.53	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	08.24.19 15.53	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	08.24.19 15.53	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	08.24.19 15.53	U	1
Total BTEX		<0.00100	0.00100	mg/kg	08.24.19 15.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	80-120	08.24.19 15.53	
4-Bromofluorobenzene	460-00-4	107	%	80-120	08.24.19 15.53	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **FS29** Matrix: Soil Date Received: 08.20.19 12.50
Lab Sample Id: 634606-035 Date Collected: 08.19.19 14.00 Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 08.21.19 10.08 Basis: Wet Weight
Seq Number: 3099406

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**812**	49.8	mg/kg	08.22.19 11.28		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DTH % Moisture:
Analyst: DTH Date Prep: 08.23.19 10.00 Basis: Wet Weight
Seq Number: 3099584

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	08.23.19 14.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<24.9	24.9	mg/kg	08.23.19 14.50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	08.23.19 14.50	U	1
Total TPH	PHC635	<24.9	24.9	mg/kg	08.23.19 14.50	U	1
Total GRO-DRO	PHC628	<24.9	24.9	mg/kg	08.23.19 14.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	08.23.19 14.50	
o-Terphenyl	84-15-1	92	%	70-135	08.23.19 14.50	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **FS29**
Lab Sample Id: 634606-035

Matrix: Soil
Date Collected: 08.19.19 14.00

Date Received: 08.20.19 12.50
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B
Tech: DTH
Analyst: DTH
Seq Number: 3099404

Date Prep: 08.22.19 09.08

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	08.22.19 15.48	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	08.22.19 15.48	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	08.22.19 15.48	U	1
m,p-Xylenes	179601-23-1	<0.00201	0.00201	mg/kg	08.22.19 15.48	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	08.22.19 15.48	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	08.22.19 15.48	U	1
Total BTEX		<0.00101	0.00101	mg/kg	08.22.19 15.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	80-120	08.22.19 15.48	
4-Bromofluorobenzene	460-00-4	108	%	80-120	08.22.19 15.48	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **FS30** Matrix: Soil Date Received: 08.20.19 12.50
Lab Sample Id: 634606-036 Date Collected: 08.19.19 14.10 Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 08.21.19 10.08 Basis: Wet Weight
Seq Number: 3099406

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**854**	50.1	mg/kg	08.22.19 11.35		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DTH % Moisture:
Analyst: DTH Date Prep: 08.23.19 10.00 Basis: Wet Weight
Seq Number: 3099584

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.1	25.1	mg/kg	08.23.19 15.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.1	25.1	mg/kg	08.23.19 15.10	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.1	25.1	mg/kg	08.23.19 15.10	U	1
Total TPH	PHC635	<25.1	25.1	mg/kg	08.23.19 15.10	U	1
Total GRO-DRO	PHC628	<25.1	25.1	mg/kg	08.23.19 15.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	08.23.19 15.10	
o-Terphenyl	84-15-1	93	%	70-135	08.23.19 15.10	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **FS30**
Lab Sample Id: 634606-036

Matrix: Soil
Date Collected: 08.19.19 14.10

Date Received: 08.20.19 12.50
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B
Tech: DTH
Analyst: DTH
Seq Number: 3099404

Date Prep: 08.22.19 09.08

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	08.22.19 16.08	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	08.22.19 16.08	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	08.22.19 16.08	U	1
m,p-Xylenes	179601-23-1	<0.00201	0.00201	mg/kg	08.22.19 16.08	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	08.22.19 16.08	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	08.22.19 16.08	U	1
Total BTEX		<0.00100	0.00100	mg/kg	08.22.19 16.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	120	%	80-120	08.22.19 16.08	
1,4-Difluorobenzene	540-36-3	110	%	80-120	08.22.19 16.08	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **SW07** Matrix: Soil Date Received: 08.20.19 12.50
Lab Sample Id: 634606-037 Date Collected: 08.19.19 14.20 Sample Depth: 0 - 7 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 08.21.19 10.08 Basis: Wet Weight
Seq Number: 3099406

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**49.8**	10.0	mg/kg	08.22.19 11.41		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DTH % Moisture:
Analyst: DTH Date Prep: 08.23.19 10.00 Basis: Wet Weight
Seq Number: 3099584

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.23.19 15.30	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.23.19 15.30	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.23.19 15.30	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.23.19 15.30	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.23.19 15.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	08.23.19 15.30	
o-Terphenyl	84-15-1	85	%	70-135	08.23.19 15.30	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id:	**SW07**	Matrix:	Soil	Date Received:	08.20.19 12.50
Lab Sample Id:	634606-037	Date Collected:	08.19.19 14.20	Sample Depth:	0 - 7 ft

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.22.19 09.08	Basis:	Wet Weight
Seq Number:	3099404				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000998	0.000998	mg/kg	08.22.19 16.48	U	1
Toluene	108-88-3	**0.00107**	0.000998	mg/kg	08.22.19 16.48		1
Ethylbenzene	100-41-4	<0.000998	0.000998	mg/kg	08.22.19 16.48	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	08.22.19 16.48	U	1
o-Xylene	95-47-6	<0.000998	0.000998	mg/kg	08.22.19 16.48	U	1
Total Xylenes	1330-20-7	<0.000998	0.000998	mg/kg	08.22.19 16.48	U	1
Total BTEX		**0.00107**	0.000998	mg/kg	08.22.19 16.48		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	117	%	80-120	08.22.19 16.48	
4-Bromofluorobenzene	460-00-4	119	%	80-120	08.22.19 16.48	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **SW08** Matrix: Soil Date Received: 08.20.19 12.50
Lab Sample Id: 634606-038 Date Collected: 08.19.19 14.30 Sample Depth: 0 - 4 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 08.21.19 10.08 Basis: Wet Weight
Seq Number: 3099406

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**724**	50.1	mg/kg	08.22.19 12.00		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DTH % Moisture:
Analyst: DTH Date Prep: 08.23.19 10.00 Basis: Wet Weight
Seq Number: 3099584

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	08.23.19 16.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<24.9	24.9	mg/kg	08.23.19 16.10	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	08.23.19 16.10	U	1
Total TPH	PHC635	<24.9	24.9	mg/kg	08.23.19 16.10	U	1
Total GRO-DRO	PHC628	<24.9	24.9	mg/kg	08.23.19 16.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	08.23.19 16.10	
o-Terphenyl	84-15-1	87	%	70-135	08.23.19 16.10	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **SW08**
Lab Sample Id: 634606-038

Matrix: Soil
Date Collected: 08.19.19 14.30

Date Received: 08.20.19 12.50
Sample Depth: 0 - 4 ft

Analytical Method: BTEX by EPA 8021B
Tech: DTH
Analyst: DTH
Seq Number: 3099404

Date Prep: 08.22.19 09.08

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	08.22.19 17.07	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	08.22.19 17.07	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	08.22.19 17.07	U	1
m,p-Xylenes	179601-23-1	<0.00201	0.00201	mg/kg	08.22.19 17.07	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	08.22.19 17.07	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	08.22.19 17.07	U	1
Total BTEX		<0.00101	0.00101	mg/kg	08.22.19 17.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	110	%	80-120	08.22.19 17.07	
4-Bromofluorobenzene	460-00-4	119	%	80-120	08.22.19 17.07	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **FS31**
Lab Sample Id: 634606-039

Matrix: Soil
Date Collected: 08.19.19 14.40

Date Received: 08.20.19 12.50
Sample Depth: 2.5 ft

Analytical Method: Chloride by EPA 300
Tech: MAB
Analyst: MAB
Seq Number: 3099406

Date Prep: 08.21.19 10.08

Prep Method: E300P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**646**	50.0	mg/kg	08.22.19 12.25		5

Analytical Method: TPH by SW8015 Mod
Tech: DTH
Analyst: DTH
Seq Number: 3099584

Date Prep: 08.23.19 10.00

Prep Method: SW8015P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.1	25.1	mg/kg	08.23.19 16.30	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.1	25.1	mg/kg	08.23.19 16.30	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.1	25.1	mg/kg	08.23.19 16.30	U	1
Total TPH	PHC635	<25.1	25.1	mg/kg	08.23.19 16.30	U	1
Total GRO-DRO	PHC628	<25.1	25.1	mg/kg	08.23.19 16.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	08.23.19 16.30	
o-Terphenyl	84-15-1	101	%	70-135	08.23.19 16.30	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **FS31**
Lab Sample Id: 634606-039

Matrix: Soil
Date Collected: 08.19.19 14.40

Date Received: 08.20.19 12.50
Sample Depth: 2.5 ft

Analytical Method: BTEX by EPA 8021B
Tech: DTH
Analyst: DTH
Seq Number: 3099404

Date Prep: 08.22.19 09.08

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000994	0.000994	mg/kg	08.22.19 18.21	U	1
Toluene	108-88-3	<0.000994	0.000994	mg/kg	08.22.19 18.21	U	1
Ethylbenzene	100-41-4	<0.000994	0.000994	mg/kg	08.22.19 18.21	U	1
m,p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	08.22.19 18.21	U	1
o-Xylene	95-47-6	<0.000994	0.000994	mg/kg	08.22.19 18.21	U	1
Total Xylenes	1330-20-7	<0.000994	0.000994	mg/kg	08.22.19 18.21	U	1
Total BTEX		<0.000994	0.000994	mg/kg	08.22.19 18.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	97	%	80-120	08.22.19 18.21	
4-Bromofluorobenzene	460-00-4	116	%	80-120	08.22.19 18.21	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **SW09** Matrix: Soil Date Received: 08.20.19 12.50
Lab Sample Id: 634606-040 Date Collected: 08.19.19 14.50 Sample Depth: 0 - 4 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 08.21.19 10.08 Basis: Wet Weight
Seq Number: 3099406

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**42.9**	9.94	mg/kg	08.22.19 12.32		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DTH % Moisture:
Analyst: DTH Date Prep: 08.23.19 10.00 Basis: Wet Weight
Seq Number: 3099584

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.1	25.1	mg/kg	08.23.19 16.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.1	25.1	mg/kg	08.23.19 16.50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.1	25.1	mg/kg	08.23.19 16.50	U	1
Total TPH	PHC635	<25.1	25.1	mg/kg	08.23.19 16.50	U	1
Total GRO-DRO	PHC628	<25.1	25.1	mg/kg	08.23.19 16.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	08.23.19 16.50	
o-Terphenyl	84-15-1	85	%	70-135	08.23.19 16.50	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id:	**SW09**	Matrix:	Soil	Date Received:	08.20.19 12.50
Lab Sample Id:	634606-040	Date Collected:	08.19.19 14.50	Sample Depth:	0 - 4 ft

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	08.22.19 09.08	Basis:	Wet Weight
Seq Number:	3099404				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000994	0.000994	mg/kg	08.22.19 18.41	U	1
Toluene	108-88-3	<0.000994	0.000994	mg/kg	08.22.19 18.41	U	1
Ethylbenzene	100-41-4	<0.000994	0.000994	mg/kg	08.22.19 18.41	U	1
m,p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	08.22.19 18.41	U	1
o-Xylene	95-47-6	<0.000994	0.000994	mg/kg	08.22.19 18.41	U	1
Total Xylenes	1330-20-7	<0.000994	0.000994	mg/kg	08.22.19 18.41	U	1
Total BTEX		<0.000994	0.000994	mg/kg	08.22.19 18.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	119	%	80-120	08.22.19 18.41	
1,4-Difluorobenzene	540-36-3	108	%	80-120	08.22.19 18.41	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **SW10** Matrix: Soil Date Received: 08.20.19 12.50
Lab Sample Id: 634606-041 Date Collected: 08.19.19 15.00 Sample Depth: 0 - 4 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 08.21.19 10.08 Basis: Wet Weight
Seq Number: 3099406

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**801**	49.9	mg/kg	08.22.19 12.38		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DTH % Moisture:
Analyst: DTH Date Prep: 08.23.19 10.00 Basis: Wet Weight
Seq Number: 3099584

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.23.19 17.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	**86.2**	25.0	mg/kg	08.23.19 17.10		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.23.19 17.10	U	1
Total TPH	PHC635	**86.2**	25.0	mg/kg	08.23.19 17.10		1
Total GRO-DRO	PHC628	**86.2**	25.0	mg/kg	08.23.19 17.10		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	08.23.19 17.10	
o-Terphenyl	84-15-1	89	%	70-135	08.23.19 17.10	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id:	**SW10**	Matrix:	Soil	Date Received:	08.20.19 12.50
Lab Sample Id:	634606-041	Date Collected:	08.19.19 15.00	Sample Depth:	0 - 4 ft

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	CAC	Date Prep:	08.23.19 14.08	Basis:	Wet Weight
Seq Number:	3099530				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	08.24.19 13.34	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	08.24.19 13.34	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	08.24.19 13.34	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	08.24.19 13.34	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	08.24.19 13.34	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	08.24.19 13.34	U	1
Total BTEX		<0.00100	0.00100	mg/kg	08.24.19 13.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	107	%	80-120	08.24.19 13.34	
1,4-Difluorobenzene	540-36-3	103	%	80-120	08.24.19 13.34	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **SW11** Matrix: Soil Date Received: 08.20.19 12.50
Lab Sample Id: 634606-042 Date Collected: 08.19.19 15.10 Sample Depth: 0 - 4 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 08.21.19 10.08 Basis: Wet Weight
Seq Number: 3099406

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**47.0**	9.92	mg/kg	08.22.19 12.44		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DTH % Moisture:
Analyst: DTH Date Prep: 08.23.19 10.00 Basis: Wet Weight
Seq Number: 3099584

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.1	25.1	mg/kg	08.23.19 17.30	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.1	25.1	mg/kg	08.23.19 17.30	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.1	25.1	mg/kg	08.23.19 17.30	U	1
Total TPH	PHC635	<25.1	25.1	mg/kg	08.23.19 17.30	U	1
Total GRO-DRO	PHC628	<25.1	25.1	mg/kg	08.23.19 17.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	140	%	70-135	08.23.19 17.30	**
o-Terphenyl	84-15-1	123	%	70-135	08.23.19 17.30	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id:	**SW11**	Matrix:	Soil	Date Received:	08.20.19 12.50
Lab Sample Id:	634606-042	Date Collected:	08.19.19 15.10	Sample Depth:	0 - 4 ft

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	CAC	Date Prep:	08.23.19 14.08	Basis:	Wet Weight
Seq Number:	3099530				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000992	0.000992	mg/kg	08.24.19 13.54	U	1
Toluene	108-88-3	<0.000992	0.000992	mg/kg	08.24.19 13.54	U	1
Ethylbenzene	100-41-4	<0.000992	0.000992	mg/kg	08.24.19 13.54	U	1
m,p-Xylenes	179601-23-1	<0.00198	0.00198	mg/kg	08.24.19 13.54	U	1
o-Xylene	95-47-6	<0.000992	0.000992	mg/kg	08.24.19 13.54	U	1
Total Xylenes	1330-20-7	<0.000992	0.000992	mg/kg	08.24.19 13.54	U	1
Total BTEX		<0.000992	0.000992	mg/kg	08.24.19 13.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	107	%	80-120	08.24.19 13.54	
4-Bromofluorobenzene	460-00-4	104	%	80-120	08.24.19 13.54	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **SW12** Matrix: Soil Date Received: 08.20.19 12.50
Lab Sample Id: 634606-043 Date Collected: 08.19.19 15.20 Sample Depth: 0 - 2.5 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 08.21.19 10.08 Basis: Wet Weight
Seq Number: 3099406

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1760**	49.7	mg/kg	08.22.19 12.51		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DTH % Moisture:
Analyst: DTH Date Prep: 08.23.19 10.00 Basis: Wet Weight
Seq Number: 3099584

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	08.23.19 17.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	**140**	24.9	mg/kg	08.23.19 17.50		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	08.23.19 17.50	U	1
Total TPH	PHC635	**140**	24.9	mg/kg	08.23.19 17.50		1
Total GRO-DRO	PHC628	**140**	24.9	mg/kg	08.23.19 17.50		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	126	%	70-135	08.23.19 17.50	
o-Terphenyl	84-15-1	129	%	70-135	08.23.19 17.50	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id:	**SW12**	Matrix:	Soil	Date Received:	08.20.19 12.50
Lab Sample Id:	634606-043	Date Collected:	08.19.19 15.20	Sample Depth:	0 - 2.5 ft

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	CAC	Date Prep:	08.23.19 14.08	Basis:	Wet Weight
Seq Number:	3099530				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000990	0.000990	mg/kg	08.24.19 14.13	U	1
Toluene	108-88-3	<0.000990	0.000990	mg/kg	08.24.19 14.13	U	1
Ethylbenzene	100-41-4	<0.000990	0.000990	mg/kg	08.24.19 14.13	U	1
m,p-Xylenes	179601-23-1	<0.00198	0.00198	mg/kg	08.24.19 14.13	U	1
o-Xylene	95-47-6	<0.000990	0.000990	mg/kg	08.24.19 14.13	U	1
Total Xylenes	1330-20-7	<0.000990	0.000990	mg/kg	08.24.19 14.13	U	1
Total BTEX		<0.000990	0.000990	mg/kg	08.24.19 14.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	109	%	80-120	08.24.19 14.13	
1,4-Difluorobenzene	540-36-3	105	%	80-120	08.24.19 14.13	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **SW13** Matrix: Soil Date Received: 08.20.19 12.50
Lab Sample Id: 634606-044 Date Collected: 08.19.19 15.30 Sample Depth: 0 - 2.5 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 08.21.19 10.08 Basis: Wet Weight
Seq Number: 3099406

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**684**	49.7	mg/kg	08.22.19 12.57		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DTH % Moisture:
Analyst: DTH Date Prep: 08.23.19 10.00 Basis: Wet Weight
Seq Number: 3099584

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.1	25.1	mg/kg	08.23.19 18.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.1	25.1	mg/kg	08.23.19 18.11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.1	25.1	mg/kg	08.23.19 18.11	U	1
Total TPH	PHC635	<25.1	25.1	mg/kg	08.23.19 18.11	U	1
Total GRO-DRO	PHC628	<25.1	25.1	mg/kg	08.23.19 18.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	174	%	70-135	08.23.19 18.11	**
o-Terphenyl	84-15-1	160	%	70-135	08.23.19 18.11	**

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id:	**SW13**	Matrix:	Soil	Date Received:	08.20.19 12.50
Lab Sample Id:	634606-044	Date Collected:	08.19.19 15.30	Sample Depth:	0 - 2.5 ft

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	CAC	Date Prep:	08.23.19 14.08	Basis:	Wet Weight
Seq Number:	3099530				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	08.24.19 14.33	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	08.24.19 14.33	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	08.24.19 14.33	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	08.24.19 14.33	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	08.24.19 14.33	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	08.24.19 14.33	U	1
Total BTEX		<0.00100	0.00100	mg/kg	08.24.19 14.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	107	%	80-120	08.24.19 14.33	
1,4-Difluorobenzene	540-36-3	102	%	80-120	08.24.19 14.33	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **SW14** Matrix: Soil Date Received: 08.20.19 12.50
Lab Sample Id: 634606-045 Date Collected: 08.19.19 15.40 Sample Depth: 0 - 2.5 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 08.21.19 10.08 Basis: Wet Weight
Seq Number: 3099406

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1450**	49.8	mg/kg	08.22.19 13.04		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DTH % Moisture:
Analyst: DTH Date Prep: 08.23.19 10.00 Basis: Wet Weight
Seq Number: 3099584

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.23.19 18.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.23.19 18.31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.23.19 18.31	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.23.19 18.31	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.23.19 18.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	167	%	70-135	08.23.19 18.31	**
o-Terphenyl	84-15-1	153	%	70-135	08.23.19 18.31	**

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id:	**SW14**	Matrix:	Soil	Date Received:	08.20.19 12.50
Lab Sample Id:	634606-045	Date Collected:	08.19.19 15.40	Sample Depth:	0 - 2.5 ft

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	CAC	Date Prep:	08.23.19 14.08	Basis:	Wet Weight
Seq Number:	3099530				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	08.24.19 14.54	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	08.24.19 14.54	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	08.24.19 14.54	U	1
m,p-Xylenes	179601-23-1	<0.00201	0.00201	mg/kg	08.24.19 14.54	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	08.24.19 14.54	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	08.24.19 14.54	U	1
Total BTEX		<0.00100	0.00100	mg/kg	08.24.19 14.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	80-120	08.24.19 14.54	
4-Bromofluorobenzene	460-00-4	99	%	80-120	08.24.19 14.54	

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id: **SW15** Matrix: Soil Date Received: 08.20.19 12.50
Lab Sample Id: 634606-046 Date Collected: 08.19.19 15.50 Sample Depth: 0 - 2.5 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 08.21.19 10.08 Basis: Wet Weight
Seq Number: 3099406

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**238**	9.94	mg/kg	08.22.19 13.10		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DTH % Moisture:
Analyst: DTH Date Prep: 08.23.19 10.00 Basis: Wet Weight
Seq Number: 3099584

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.1	25.1	mg/kg	08.23.19 18.51	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.1	25.1	mg/kg	08.23.19 18.51	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.1	25.1	mg/kg	08.23.19 18.51	U	1
Total TPH	PHC635	<25.1	25.1	mg/kg	08.23.19 18.51	U	1
Total GRO-DRO	PHC628	<25.1	25.1	mg/kg	08.23.19 18.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	201	%	70-135	08.23.19 18.51	**
o-Terphenyl	84-15-1	179	%	70-135	08.23.19 18.51	**

Certificate of Analytical Results 634606

LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

Sample Id:	**SW15**	Matrix:	Soil	Date Received:	08.20.19 12.50
Lab Sample Id:	634606-046	Date Collected:	08.19.19 15.50	Sample Depth:	0 - 2.5 ft

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	CAC	Date Prep:	08.23.19 14.08	Basis:	Wet Weight
Seq Number:	3099530				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000998	0.000998	mg/kg	08.24.19 15.14	U	1
Toluene	108-88-3	<0.000998	0.000998	mg/kg	08.24.19 15.14	U	1
Ethylbenzene	100-41-4	<0.000998	0.000998	mg/kg	08.24.19 15.14	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	08.24.19 15.14	U	1
o-Xylene	95-47-6	<0.000998	0.000998	mg/kg	08.24.19 15.14	U	1
Total Xylenes	1330-20-7	<0.000998	0.000998	mg/kg	08.24.19 15.14	U	1
Total BTEX		<0.000998	0.000998	mg/kg	08.24.19 15.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	80-120	08.24.19 15.14	
4-Bromofluorobenzene	460-00-4	106	%	80-120	08.24.19 15.14	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 634606

LT Environmental, Inc.

Picket Draw Federal #001

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3099290 Matrix: Solid Date Prep: 08.20.19
MB Sample Id: 7684654-1-BLK LCS Sample Id: 7684654-1-BKS LCSD Sample Id: 7684654-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	300	300	100	301	100	80-120	0	20	mg/kg	08.20.19 18:32	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3099263 Matrix: Solid Date Prep: 08.21.19
MB Sample Id: 7684648-1-BLK LCS Sample Id: 7684648-1-BKS LCSD Sample Id: 7684648-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	300	293	98	290	97	80-120	1	20	mg/kg	08.21.19 20:10	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3099406 Matrix: Solid Date Prep: 08.21.19
MB Sample Id: 7684650-1-BLK LCS Sample Id: 7684650-1-BKS LCSD Sample Id: 7684650-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	100	98.7	99	99.6	100	80-120	1	20	mg/kg	08.22.19 09:35	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3099290 Matrix: Soil Date Prep: 08.20.19
Parent Sample Id: 634583-001 MS Sample Id: 634583-001 S MSD Sample Id: 634583-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1380	2470	4020	107	4040	107	80-120	0	20	mg/kg	08.20.19 18:52	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3099290 Matrix: Soil Date Prep: 08.20.19
Parent Sample Id: 634583-011 MS Sample Id: 634583-011 S MSD Sample Id: 634583-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1250	1250	2670	114	2600	108	80-120	3	20	mg/kg	08.20.19 20:33	

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 634606

LT Environmental, Inc.

Picket Draw Federal #001

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3099263 Matrix: Soil Date Prep: 08.21.19
Parent Sample Id: 634606-007 MS Sample Id: 634606-007 S MSD Sample Id: 634606-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	195	251	472	110	468	109	80-120	1	20	mg/kg	08.21.19 20:30	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3099263 Matrix: Soil Date Prep: 08.21.19
Parent Sample Id: 634606-017 MS Sample Id: 634606-017 S MSD Sample Id: 634606-017 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	43.0	248	279	95	291	99	80-120	4	20	mg/kg	08.21.19 22:02	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3099406 Matrix: Soil Date Prep: 08.21.19
Parent Sample Id: 634606-027 MS Sample Id: 634606-027 S MSD Sample Id: 634606-027 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1450	2490	4010	103	4130	108	80-120	3	20	mg/kg	08.22.19 09:54	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3099406 Matrix: Soil Date Prep: 08.21.19
Parent Sample Id: 634606-037 MS Sample Id: 634606-037 S MSD Sample Id: 634606-037 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	49.8	251	279	91	284	94	80-120	2	20	mg/kg	08.22.19 11:47	

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3099052 Matrix: Solid Date Prep: 08.20.19
MB Sample Id: 7684595-1-BLK LCS Sample Id: 7684595-1-BKS LCSD Sample Id: 7684595-1-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)	<9.90	1000	1000	100	974	98	70-135	3	35	mg/kg	08.20.19 11:28	
Diesel Range Organics (DRO)	<9.90	1000	1030	103	992	100	70-135	4	35	mg/kg	08.20.19 11:28	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	130		115		115		70-135	%	08.20.19 11:28
o-Terphenyl	128		118		116		70-135	%	08.20.19 11:28

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 634606

LT Environmental, Inc.

Picket Draw Federal #001

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3099358 Matrix: Solid Date Prep: 08.21.19
MB Sample Id: 7684790-1-BLK LCS Sample Id: 7684790-1-BKS LCSD Sample Id: 7684790-1-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)	<9.88	1000	1130	113	988	99	70-135	13	35	mg/kg	08.21.19 13:11	
Diesel Range Organics (DRO)	11.9	1000	1180	118	1020	102	70-135	15	35	mg/kg	08.21.19 13:11	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	112		142	**	123		70-135	%	08.21.19 13:11
o-Terphenyl	111		152	**	127		70-135	%	08.21.19 13:11

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3099498 Matrix: Solid Date Prep: 08.22.19
MB Sample Id: 7684879-1-BLK LCS Sample Id: 7684879-1-BKS LCSD Sample Id: 7684879-1-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)	<9.88	1000	936	94	901	90	70-135	4	35	mg/kg	08.22.19 11:26	
Diesel Range Organics (DRO)	<9.88	1000	902	90	883	88	70-135	2	35	mg/kg	08.22.19 11:26	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	110		115		116		70-135	%	08.22.19 11:26
o-Terphenyl	95		104		107		70-135	%	08.22.19 11:26

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3099584 Matrix: Solid Date Prep: 08.23.19
MB Sample Id: 7684955-1-BLK LCS Sample Id: 7684955-1-BKS LCSD Sample Id: 7684955-1-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)	<9.88	1000	1020	102	999	100	70-135	2	35	mg/kg	08.23.19 11:09	
Diesel Range Organics (DRO)	<9.88	1000	1010	101	998	100	70-135	1	35	mg/kg	08.23.19 11:09	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	115		126		121		70-135	%	08.23.19 11:09
o-Terphenyl	109		117		114		70-135	%	08.23.19 11:09

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 634606

LT Environmental, Inc.

Picket Draw Federal #001

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3099052 Matrix: Soil Date Prep: 08.20.19
Parent Sample Id: 634529-001 MS Sample Id: 634529-001 S MSD Sample Id: 634529-001 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)	<9.91	1000	951	95	964	96	70-135	1	35	mg/kg	08.20.19 12:29	
Diesel Range Organics (DRO)	<9.91	1000	974	97	988	99	70-135	1	35	mg/kg	08.20.19 12:29	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	114		108		70-135	%	08.20.19 12:29
o-Terphenyl	122		112		70-135	%	08.20.19 12:29

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3099358 Matrix: Soil Date Prep: 08.21.19
Parent Sample Id: 634606-006 MS Sample Id: 634606-006 S MSD Sample Id: 634606-006 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)	<9.87	999	970	97	981	98	70-135	1	35	mg/kg	08.21.19 14:12	
Diesel Range Organics (DRO)	18.2	999	1000	98	1020	100	70-135	2	35	mg/kg	08.21.19 14:12	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	134		133		70-135	%	08.21.19 14:12
o-Terphenyl	128		134		70-135	%	08.21.19 14:12

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3099584 Matrix: Soil Date Prep: 08.23.19
Parent Sample Id: 634914-021 MS Sample Id: 634914-021 S MSD Sample Id: 634914-021 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)	<9.92	1000	1010	101	982	98	70-135	3	35	mg/kg	08.23.19 12:10	
Diesel Range Organics (DRO)	<9.92	1000	1030	103	956	96	70-135	7	35	mg/kg	08.23.19 12:10	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	129		126		70-135	%	08.23.19 12:10
o-Terphenyl	109		107		70-135	%	08.23.19 12:10

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 634606

LT Environmental, Inc.

Picket Draw Federal #001

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3099498 Matrix: Soil Date Prep: 08.22.19
Parent Sample Id: 634606-025 MS Sample Id: 634606-025 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	901	995	881	0	70-135	mg/kg	08.22.19 12:27	X
Diesel Range Organics (DRO)	1170	995	1110	0	70-135	mg/kg	08.22.19 12:27	X

Surrogate	MS %Rec	MS Flag	Limits	Units	Analysis Date
1-Chlorooctane	116		70-135	%	08.22.19 12:27
o-Terphenyl	115		70-135	%	08.22.19 12:27

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3099039 Matrix: Solid Date Prep: 08.20.19
MB Sample Id: 7684594-1-BLK LCS Sample Id: 7684594-1-BKS LCSD Sample Id: 7684594-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00101	0.101	0.0926	92	0.0944	95	70-130	2	35	mg/kg	08.20.19 10:59	
Toluene	<0.00101	0.101	0.0906	90	0.0948	95	70-130	5	35	mg/kg	08.20.19 10:59	
Ethylbenzene	<0.000503	0.101	0.0920	91	0.0956	96	71-129	4	35	mg/kg	08.20.19 10:59	
m,p-Xylenes	<0.00101	0.201	0.189	94	0.193	97	70-135	2	35	mg/kg	08.20.19 10:59	
o-Xylene	<0.000503	0.101	0.0951	94	0.0962	97	71-133	1	35	mg/kg	08.20.19 10:59	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	94		103		98		80-120	%	08.20.19 10:59
4-Bromofluorobenzene	93		110		103		80-120	%	08.20.19 10:59

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3099361 Matrix: Solid Date Prep: 08.21.19
MB Sample Id: 7684795-1-BLK LCS Sample Id: 7684795-1-BKS LCSD Sample Id: 7684795-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.100	0.106	106	0.106	106	70-130	0	35	mg/kg	08.21.19 10:41	
Toluene	<0.00100	0.100	0.103	103	0.104	104	70-130	1	35	mg/kg	08.21.19 10:41	
Ethylbenzene	0.000510	0.100	0.110	110	0.111	111	71-129	1	35	mg/kg	08.21.19 10:41	
m,p-Xylenes	<0.00100	0.200	0.229	115	0.229	115	70-135	0	35	mg/kg	08.21.19 10:41	
o-Xylene	<0.000500	0.100	0.114	114	0.114	114	71-133	0	35	mg/kg	08.21.19 10:41	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		111		105		80-120	%	08.21.19 10:41
4-Bromofluorobenzene	106		122	**	118		80-120	%	08.21.19 10:41

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 634606

LT Environmental, Inc.

Picket Draw Federal #001

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3099404 Matrix: Solid Date Prep: 08.22.19
MB Sample Id: 7684821-1-BLK LCS Sample Id: 7684821-1-BKS LCSD Sample Id: 7684821-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.100	0.101	101	0.104	104	70-130	3	35	mg/kg	08.22.19 09:30	
Toluene	<0.00100	0.100	0.0942	94	0.0985	99	70-130	4	35	mg/kg	08.22.19 09:30	
Ethylbenzene	<0.00100	0.100	0.101	101	0.106	106	71-129	5	35	mg/kg	08.22.19 09:30	
m,p-Xylenes	<0.00200	0.200	0.210	105	0.220	110	70-135	5	35	mg/kg	08.22.19 09:30	
o-Xylene	<0.00100	0.100	0.104	104	0.110	110	71-133	6	35	mg/kg	08.22.19 09:30	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	116		112		106		80-120	%	08.22.19 09:30
4-Bromofluorobenzene	117		116		120		80-120	%	08.22.19 09:30

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3099530 Matrix: Solid Date Prep: 08.23.19
MB Sample Id: 7684919-1-BLK LCS Sample Id: 7684919-1-BKS LCSD Sample Id: 7684919-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.100	0.0902	90	0.0906	91	70-130	0	35	mg/kg	08.23.19 19:45	
Toluene	<0.00100	0.100	0.0999	100	0.0950	95	70-130	5	35	mg/kg	08.23.19 19:45	
Ethylbenzene	<0.00100	0.100	0.114	114	0.110	110	71-129	4	35	mg/kg	08.23.19 19:45	
m,p-Xylenes	<0.00200	0.200	0.231	116	0.226	113	70-135	2	35	mg/kg	08.23.19 19:45	
o-Xylene	<0.00100	0.100	0.114	114	0.112	112	71-133	2	35	mg/kg	08.23.19 19:45	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	111		106		101		80-120	%	08.23.19 19:45
4-Bromofluorobenzene	118		112		114		80-120	%	08.23.19 19:45

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3099039 Matrix: Soil Date Prep: 08.20.19
Parent Sample Id: 634529-001 MS Sample Id: 634529-001 S MSD Sample Id: 634529-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000990	0.0990	0.0979	99	0.0923	93	70-130	6	35	mg/kg	08.20.19 12:38	
Toluene	<0.000990	0.0990	0.0932	94	0.0912	92	70-130	2	35	mg/kg	08.20.19 12:38	
Ethylbenzene	<0.000990	0.0990	0.0956	97	0.0941	95	71-129	2	35	mg/kg	08.20.19 12:38	
m,p-Xylenes	<0.000990	0.198	0.195	98	0.191	96	70-135	2	35	mg/kg	08.20.19 12:38	
o-Xylene	<0.000990	0.0990	0.0968	98	0.0948	95	71-133	2	35	mg/kg	08.20.19 12:38	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		106		80-120	%	08.20.19 12:38
4-Bromofluorobenzene	109		110		80-120	%	08.20.19 12:38

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 634606

LT Environmental, Inc.

Picket Draw Federal #001

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3099361 Matrix: Soil Date Prep: 08.21.19
Parent Sample Id: 634606-006 MS Sample Id: 634606-006 S MSD Sample Id: 634606-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000998	0.0998	0.0918	92	0.0932	94	70-130	2	35	mg/kg	08.21.19 12:21	
Toluene	<0.000499	0.0998	0.0933	93	0.0955	96	70-130	2	35	mg/kg	08.21.19 12:21	
Ethylbenzene	0.000984	0.0998	0.107	106	0.0996	99	71-129	7	35	mg/kg	08.21.19 12:21	
m,p-Xylenes	<0.000998	0.200	0.202	101	0.204	103	70-135	1	35	mg/kg	08.21.19 12:21	
o-Xylene	<0.000499	0.0998	0.101	101	0.102	103	71-133	1	35	mg/kg	08.21.19 12:21	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	109		105		80-120	%	08.21.19 12:21
4-Bromofluorobenzene	124	**	126	**	80-120	%	08.21.19 12:21

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3099404 Matrix: Soil Date Prep: 08.22.19
Parent Sample Id: 634606-025 MS Sample Id: 634606-025 S MSD Sample Id: 634606-025 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.100	0.0912	91	0.0879	88	70-130	4	35	mg/kg	08.22.19 10:10	
Toluene	<0.00100	0.100	0.0857	86	0.0807	81	70-130	6	35	mg/kg	08.22.19 10:10	
Ethylbenzene	0.00117	0.100	0.0897	89	0.0834	82	71-129	7	35	mg/kg	08.22.19 10:10	
m,p-Xylenes	0.00576	0.200	0.183	89	0.169	81	70-135	8	35	mg/kg	08.22.19 10:10	
o-Xylene	0.00533	0.100	0.0971	92	0.0899	85	71-133	8	35	mg/kg	08.22.19 10:10	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		93		80-120	%	08.22.19 10:10
4-Bromofluorobenzene	118		118		80-120	%	08.22.19 10:10

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3099530 Matrix: Soil Date Prep: 08.23.19
Parent Sample Id: 634675-001 MS Sample Id: 634675-001 S MSD Sample Id: 634675-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000996	0.0996	0.0893	90	0.0936	94	70-130	5	35	mg/kg	08.23.19 20:25	
Toluene	0.110	0.0996	0.127	17	0.121	11	70-130	5	35	mg/kg	08.23.19 20:25	X
Ethylbenzene	0.204	0.0996	0.204	0	0.188	0	71-129	8	35	mg/kg	08.23.19 20:25	X
m,p-Xylenes	0.690	0.199	0.622	0	0.567	0	70-135	9	35	mg/kg	08.23.19 20:25	X
o-Xylene	0.392	0.0996	0.363	0	0.333	0	71-133	9	35	mg/kg	08.23.19 20:25	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		114		80-120	%	08.23.19 20:25
4-Bromofluorobenzene	119		117		80-120	%	08.23.19 20:25

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	

Chain of Custody

XENCO LABORATORIES

Work Order No: 23-16006

Page 1 of 5

Project Manager:	Dan Moir	Bill to (if different):	Kyle Littrell
Company Name:	T.T. Environmental, Inc., Midland office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, Tx 79705	City, State ZIP:	
Phone:	(432) 706-3949	Email:	

Work Order Comments

Program: UST/PST ☐ RP ☐ Brownfields ☐ RC ☐ Superfund ☐

State of Project:

Reporting Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐

Deliverables: EDD ☐ ADaPT ☐ Other

Project Name:	Pickett Draw Federal #001	Turn Around	
Project Number:	01250100	Routine	X
PO: Number:	Kelly Canada	Rush:	
Sampler's Name:	Lynda Lauritsen	Due Date:	

SAMPLE RECEIPT

Temp Blank:	Yes (No)	Wet Ice:	Yes (No)
Temperature (°C):	1.6	Thermometer ID:	
Received Intact:	Yes (No)		
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.1 °C
Sample Custody Seals:	Yes No (N/A)	Total Containers:	16

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Chloride (EPA 300.0)	BTEX (EPA 8260B)	GRO/DRO (EPA 8015)
FS01	S	07/18/23	10:10	1'	1	X	X	X
FS02			10:15	1'	1			
FS03			10:20	1'	1			
FS04			10:40	1'	1			
FS05			10:45	1'	1			
FS06			10:50	1'	1			
FS07			11:00	1'	1			
FS08			11:05	1'	1			
FS09			11:10	1'	1			
FS10			11:15	1'	1			

Work Order Notes

TAT starts the day received by the lab, if received by 4:30pm

Sample Comments

Total 300.0 / 9056 300.0 / 9056: BACKA 100PPM Texas 11: Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 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 1631 / 245.1 / 7470 / 7471 : Hg

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received for: (Signature)	Date/Time
	[signature]	07/19/23 1234			

Chain of Custody

XENCO LABORATORIES

Work Order No: [illegible]

Page 2 of 5

Project Manager:	Dave Moir	Bill to (if different):	Cory Cerall
Company Name:	LT Environmental, Inc. - Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	
Phone:	432) 704-5178	Email:	

Work Order Comments

Program: UST/PST ☐ RCP ☐ Brownfields ☐ RRC ☐ Superfund ☐

State of Project:

Reporting Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐

Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Pickett Draw Federal #001	Turn Around	
Project Number:	07021010-00	Routine	X
PO Number:	Eddy County	Rush:	
Sampler's Name:	Cyndi Lewandowski	Due Date:	

SAMPLE RECEIPT

Temp Blank:	Yes No	Wet Ice:	Yes No
Temperature (°C):		Thermometer ID:	
Received Intact:	Yes No	Cooler Depth:	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	
Sample Custody Seals:	Yes No N/A	Total Containers:	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Pb (SW6010)	BTEX (SW8021)	TPH (SW8015)
FS11	S	08/10/23	11:45	2'	1	X	X	X
FS12			11:55	3'				
SW01			12:05	0-1'				
SW02			12:10	0-1'				
FS13			12:20	3'				
SW03			12:30	0-1'				
SW04			12:40	0-1'				
FS14			12:50	3.5'				
FS15			12:55	4'				
FS16			12:55	4'				

Work Order Notes

TAT starts the day received by the lab, if received by 4:30pm

Sample Comments

Total 200.7 / 6010: 200.8 / 6020: 8RCRA 13PPM Target 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 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 1631 / 245.1 / 7470 / 7471 : Hg

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
[signature]	[signature]	08/10/23 12:24			

Chain of Custody

XENCO LABORATORIES

Work Order No: 634 1040

Page 3 of 5

Project Manager:	Dan Moir	Bill to (corporation):	Apex Lynx
Company Name:	LT Environmental, Inc. - Permian office	Company Name:	CVI Energy
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, Tx 79705	City, State ZIP:	
Phone:	(432) 699-0949	Email:	

Work Order Comments

Program: UST/PST ☐ PP ☐ Brownfields ☐ RC ☐ Superfund ☐

State of Project:

Reporting Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐

Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Pickett Draw Federal #001	Turn Around:	
Project Number:	01209003	Routine:	☑
P.O. Number:	Eddy County	Rush:	
Sampler's Name:	Lynda Lauenburg	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Temperature (°C):		Thermometer ID:	
Received Intact:	Yes No	Cooler Custody Seals:	Yes No N/A
Cooler Custody Seals:	Yes No N/A	Correction Factor:	
Sample Custody Seals:	Yes No N/A	Total Containers:	

ANALYSIS REQUEST

Work Order Notes

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (8015)	BTEX (8021B)	Chloride - EPA 300.0
FS12	S	10/26/23	11:35	4'	1	X	X	X
FS18	S		11:45	4'	1			
FS19	S		11:55	4'	1			
FS20	S		12:10	4'	1			
FS21	S		12:20	4'	1			
FS22	S	10/26/23	12:00	4'	1			
FS23	S		12:10	4'	1			
FS24	S		12:15	4'	1			
FS25	S		12:20	4'	1			
FS26	S		12:15	4'	1			

Sample Comments

Total: 300.0 / 9056 280.8 / 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 SiO2 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 Zn 1631 / 245.1 / 7470 / 7471 : Hg

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
[signature]	[signature]	10/26/23 12:20			

Chain of Custody

XENCO LABORATORIES

Work Order No: 23416

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Project Manager:	Dan Moir	Company Name:	Kyle Littrell
Company Name:	LT Environmental, Inc. - Permian office	Address:	XTO Energy
Address:	3300 North A Street	City, State ZIP:	
City, State ZIP:	Midland, Tx 79705		
Phone:	(432) 706-3949		

Work Order Comments

Program: UST/PST ☐ RP ☐ Drinking Water ☐ NPDES ☐ Superfund ☐

State of Project:

Reporting Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐

Deliverables: EDD ☐ ADaCT ☐ Other

Project Name:	Plutonic Drive Fiberglass #001	Turn Around	
Project Number:	E20191501	Routine	X
P.O. Number:	Eddy County	Rush:	
Sampler's Name:	Lynda Lewandowski	Due Date:	

SAMPLE RECEIPT

Temp Blank:	Yes No	Wet Ice:	Yes No
Temperature (°C):		Thermometer ID:	
Received Intact:	Yes No		
Cooler Custody Seals:	Yes No N/A	Custody Seals:	
Sample Custody Seals:	Yes No N/A	Total Containers:	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Chloride (EPA 300.0)	BTEX (EPA 8021B)	Chloride (EPA 300.0)	Sample Comments
FS1.7	S	09/01/22	11:45	7'	1	X	X	X	
SW1.5			12:30	0-5'	1				
SW1.4			12:45	0-5'	1				
FS2.8			13:55	4'	1				
FS2.9			14:00	4'	1				
FS3.0			14:10	4'	1				
SW3.7			19:20	0-2'	1				
SW3.8			19:30	0-4'	1				
FS3.1			19:40	2.5'	1				
SW3.9			19:50	0-4'	1				

Work Order Notes

DX Leads are only analyzed by the lab, if requested by client.

Sample Comments

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 SiO2 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 1631 / 245.1 / 7470 / 7471 : Hg

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		09/06/22 1:15			
2					
3					

Chain of Custody

XENCO LABORATORIES

Work Order No: 23-1-1

Page 5 of 5

Project Manager:	Dan Moir	Bill to (if different):	Kyle Lemon
Company Name:	LT Environmental, Inc. - Permian office	Company Name:	ATC Energy
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, Tx 79705	City, State ZIP:	
Phone:	(432) 290-2843	Email:	[illegible]

Work Order Comments

Program: UST/PST ☐ PP ☐ Brownfields ☐ RC ☐ Superfund ☐

State of Project:

Reporting Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐

Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Pickett Draw Federal #001	Turn Around	
Project Number:	20241010	Routine	X
P.O. Number:	Eddy County	Rush:	
Sampler's Name:	Lynda Laumbach	Due Date:	

SAMPLE RECEIPT			
Temp Blank	Yes No	Wet Ice	Yes No
Temperature (°C)		Thermometer ID	
Received Intact	Yes No		
Cooler Custody Seals	Yes No N/A	Correction Factor	
Sample Custody Seals	Yes No N/A	Total Containers	

ANALYSIS REQUEST

Work Order Notes

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Chloride (EPA 300.0)	BTEX (EPA 8021B)	Chloride (EPA 300.0)
SW10	S	11/10/22	10:00	0-0.5'	1	X	X	X
SW11	S		10:10	0-0.5'	1			
SW12	S		10:20	0-0.5'	1			
SW13	S		10:30	0-0.5'	1			
SW14	S		10:40	0-0.5'	1			
SW15	S		10:50	0-0.5'	1			

Sample Comments

Total: 200.7 / 6010 300.8 / 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 SiO2 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 1630 / 245.1 / 7470 / 7471: Hg

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		11/10/22 10:10			
2					
3					

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 08/20/2019 12:50:00 PM

Work Order #: 634606

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

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1.6
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**No**
#5 Custody Seals intact on sample bottles?	**No**
#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**
#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: Elizabeth McClellan Date: 08/20/2019

Checklist reviewed by: Jessica Kramer Date: 08/21/2019

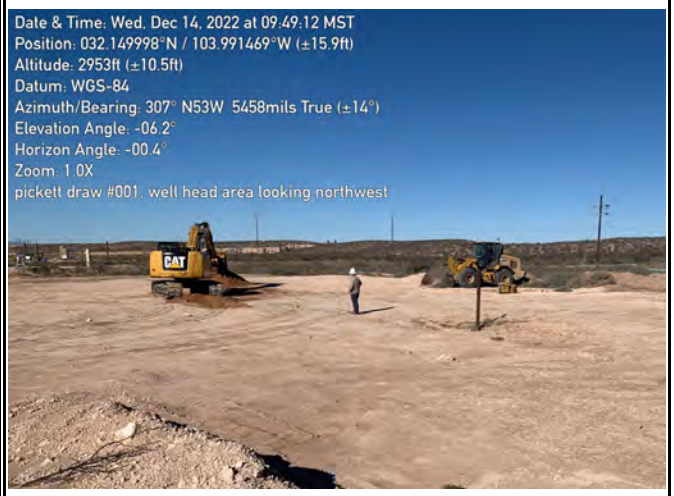
ENSOLUM

APPENDIX B

Photographic Log

ENSOLUM

Photographic Log
XTO Energy, Inc.
Pickett Draw Federal #001
Incident Number NAB1919955454



Photograph 1 Date: 12/14/2023
Description: Excavation of residual impacts near the wellhead, view northwest.

Photograph 2 Date: 12/14/2023
Description: Excavation in the vicinity of sidewall soil sample SW12.

Photograph 3 Date: 12/14/2023
Description: Excavation of impacted soil in vicinity of sidewall soil sample SW05, view west.

Photograph 4 Date: 12/29/2023
Description: Excavation of impacted soil in the vicinity of sidewall soil sample SW12, view west.

ENSOLUM

APPENDIX C

Laboratory Analytical Reports & Chain of Custody Documentation

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Tacoma Morrissey
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 12/27/2022 9:19:04 AM

JOB DESCRIPTION

Pickett Draw Federal
SDG NUMBER 03E1558127

JOB NUMBER

890-3662-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

my EOL

Eurofins Carlsbad

Job Notes

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
12/27/2022 9:19:04 AM

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

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: Pickett Draw Federal

Job ID: 890-3662-1
SDG: 03E1558127

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1+	Surrogate recovery exceeds control limits, high 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: Ensolum
Project/Site: Pickett Draw Federal

Job ID: 890-3662-1
SDG: 03E1558127

Job ID: 890-3662-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3662-1

Receipt
The samples were received on 12/15/2022 8:28 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 1.0°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: SW16 (890-3662-1), SW17 (890-3662-2) and SW18 (890-3662-3).

GC VOA
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 samples were outside control limits: (CCV 880-41982/5) and (LCSD 880-41926/3-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: The method blank for preparation batch 880-41926 and analytical batch 880-41982 contained Gasoline Range Organics (GRO)-C6-C10 above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8015MOD_NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-41926 and analytical batch 880-41982 recovered outside control limits for the following analytes: Diesel Range Organics (Over C10-C28).

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) precision for preparation batch 880-41926 and analytical batch 880-41982 was outside control limits. Sample non-homogeneity is suspected.

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: Ensolum
Project/Site: Pickett Draw Federal

Job ID: 890-3662-1
SDG: 03E1558127

Client Sample ID: SW16

Lab Sample ID: 890-3662-1
Matrix: Solid

Date Collected: 12/14/22 09:50
Date Received: 12/15/22 08:28
Sample Depth: 0 - 2.5

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		12/22/22 12:14	12/26/22 23:51	1
Toluene	<0.00201	U F1	0.00201	mg/Kg		12/22/22 12:14	12/26/22 23:51	1
Ethylbenzene	<0.00201	U F1	0.00201	mg/Kg		12/22/22 12:14	12/26/22 23:51	1
m-Xylene & p-Xylene	<0.00402	U F1	0.00402	mg/Kg		12/22/22 12:14	12/26/22 23:51	1
o-Xylene	<0.00201	U F1	0.00201	mg/Kg		12/22/22 12:14	12/26/22 23:51	1
Xylenes, Total	<0.00402	U F1	0.00402	mg/Kg		12/22/22 12:14	12/26/22 23:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*	*12/22/22 12:14*	*12/26/22 23:51*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*12/22/22 12:14*	*12/26/22 23:51*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			12/27/22 09:32	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**1390**		50.0	mg/Kg			12/16/22 14:51	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		12/15/22 14:18	12/20/22 12:04	1
Diesel Range Organics (Over C10-C28)	**817**		50.0	mg/Kg		12/15/22 14:18	12/20/22 12:04	1
Oil Range Organics (Over C28-C36)	**574**		50.0	mg/Kg		12/15/22 14:18	12/20/22 12:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*83*		*70 - 130*	*12/15/22 14:18*	*12/20/22 12:04*	*1*
o-Terphenyl	*84*		*70 - 130*	*12/15/22 14:18*	*12/20/22 12:04*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**537**		4.96	mg/Kg			12/16/22 15:43	1

Client Sample ID: SW17

Lab Sample ID: 890-3662-2
Matrix: Solid

Date Collected: 12/14/22 12:45
Date Received: 12/15/22 08:28
Sample Depth: 0 - 5

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		12/22/22 12:14	12/27/22 00:11	1
Toluene	<0.00200	U	0.00200	mg/Kg		12/22/22 12:14	12/27/22 00:11	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		12/22/22 12:14	12/27/22 00:11	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		12/22/22 12:14	12/27/22 00:11	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		12/22/22 12:14	12/27/22 00:11	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		12/22/22 12:14	12/27/22 00:11	1

Client Sample Results

Client: Ensolum
Project/Site: Pickett Draw Federal

Job ID: 890-3662-1
SDG: 03E1558127

Client Sample ID: SW17

Lab Sample ID: 890-3662-2
Matrix: Solid

Date Collected: 12/14/22 12:45
Date Received: 12/15/22 08:28
Sample Depth: 0 - 5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	115		70 - 130	12/22/22 12:14	12/27/22 00:11	1
1,4-Difluorobenzene (Surr)	97		70 - 130	12/22/22 12:14	12/27/22 00:11	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			12/27/22 09:32	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			12/16/22 14:51	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		12/15/22 14:18	12/16/22 12:55	1
Diesel Range Organics (Over C10-C28)	<49.9	U *1	49.9	mg/Kg		12/15/22 14:18	12/16/22 12:55	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		12/15/22 14:18	12/16/22 12:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	113		70 - 130	12/15/22 14:18	12/16/22 12:55	1
o-Terphenyl	105		70 - 130	12/15/22 14:18	12/16/22 12:55	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**231**		5.02	mg/Kg			12/16/22 16:12	1

Client Sample ID: SW18

Lab Sample ID: 890-3662-3
Matrix: Solid

Date Collected: 12/14/22 13:00
Date Received: 12/15/22 08:28
Sample Depth: 0 - 5

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		12/22/22 12:14	12/27/22 00:32	1
Toluene	<0.00199	U	0.00199	mg/Kg		12/22/22 12:14	12/27/22 00:32	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		12/22/22 12:14	12/27/22 00:32	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		12/22/22 12:14	12/27/22 00:32	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		12/22/22 12:14	12/27/22 00:32	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		12/22/22 12:14	12/27/22 00:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	117		70 - 130	12/22/22 12:14	12/27/22 00:32	1
1,4-Difluorobenzene (Surr)	104		70 - 130	12/22/22 12:14	12/27/22 00:32	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			12/27/22 09:32	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**473**		49.9	mg/Kg			12/16/22 14:51	1

Client Sample Results

Client: Ensolum
Project/Site: Pickett Draw Federal

Job ID: 890-3662-1
SDG: 03E1558127

Client Sample ID: SW18

Lab Sample ID: 890-3662-3
Matrix: Solid

Date Collected: 12/14/22 13:00
Date Received: 12/15/22 08:28
Sample Depth: 0 - 5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		12/15/22 14:18	12/16/22 13:17	1
Diesel Range Organics (Over C10-C28)	**473**	***1**	49.9		mg/Kg		12/15/22 14:18	12/16/22 13:17	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		12/15/22 14:18	12/16/22 13:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*111*		*70 - 130*	*12/15/22 14:18*	*12/16/22 13:17*	*1*
o-Terphenyl	*110*		*70 - 130*	*12/15/22 14:18*	*12/16/22 13:17*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**26.3**		4.99		mg/Kg			12/16/22 16:27	1

Surrogate Summary

Client: Ensolum
Project/Site: Pickett Draw Federal

Job ID: 890-3662-1
SDG: 03E1558127

Method: 8021B - Volatile Organic Compounds (GC)

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

Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
890-3662-1	SW16	117	103
890-3662-1 MS	SW16	114	101
890-3662-1 MSD	SW16	99	94
890-3662-2	SW17	115	97
890-3662-3	SW18	117	104
LCS 880-42514/1-A	Lab Control Sample	96	93
LCSD 880-42514/2-A	Lab Control Sample Dup	98	93
MB 880-42487/5-A	Method Blank	97	92
MB 880-42514/5-A	Method Blank	107	97

Percent Surrogate Recovery (Acceptance Limits)

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**

Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-22856-A-87-B MS	Matrix Spike	82	74
880-22856-A-87-C MSD	Matrix Spike Duplicate	80	79
890-3615-A-1-E MS	Matrix Spike	109	98
890-3615-A-1-F MSD	Matrix Spike Duplicate	105	86
890-3662-1	SW16	83	84
890-3662-2	SW17	113	105
890-3662-3	SW18	111	110
LCS 880-41926/2-A	Lab Control Sample	98	111
LCS 880-42287/2-A	Lab Control Sample	100	106
LCSD 880-41926/3-A	Lab Control Sample Dup	128	134 S1+
LCSD 880-42287/3-A	Lab Control Sample Dup	105	111
MB 880-41926/1-A	Method Blank	112	115
MB 880-42287/1-A	Method Blank	91	95

Percent Surrogate Recovery (Acceptance Limits)

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Pickett Draw Federal

Job ID: 890-3662-1
SDG: 03E1558127

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-42487/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 42596 — **Prep Batch: 42487**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/22/22 10:36	12/26/22 13:51	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/22/22 10:36	12/26/22 13:51	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/22/22 10:36	12/26/22 13:51	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		12/22/22 10:36	12/26/22 13:51	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/22/22 10:36	12/26/22 13:51	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		12/22/22 10:36	12/26/22 13:51	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*	*12/22/22 10:36*	*12/26/22 13:51*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*12/22/22 10:36*	*12/26/22 13:51*	*1*

Lab Sample ID: MB 880-42514/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 42596 — **Prep Batch: 42514**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/22/22 12:14	12/26/22 23:30	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/22/22 12:14	12/26/22 23:30	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/22/22 12:14	12/26/22 23:30	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		12/22/22 12:14	12/26/22 23:30	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/22/22 12:14	12/26/22 23:30	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		12/22/22 12:14	12/26/22 23:30	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*	*12/22/22 12:14*	*12/26/22 23:30*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*12/22/22 12:14*	*12/26/22 23:30*	*1*

Lab Sample ID: LCS 880-42514/1-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 42596 — **Prep Batch: 42514**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09444		mg/Kg		94	70 - 130		
Toluene			0.100	0.09109		mg/Kg		91	70 - 130		
Ethylbenzene			0.100	0.08635		mg/Kg		86	70 - 130		
m-Xylene & p-Xylene			0.200	0.1924		mg/Kg		96	70 - 130		
o-Xylene			0.100	0.09703		mg/Kg		97	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*

Lab Sample ID: LCSD 880-42514/2-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 42596 — **Prep Batch: 42514**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09605		mg/Kg		96	70 - 130	2	35

QC Sample Results

Client: Ensolum
Project/Site: Pickett Draw Federal

Job ID: 890-3662-1
SDG: 03E1558127

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

Lab Sample ID: LCSD 880-42514/2-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 42596 — **Prep Batch: 42514**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.09288		mg/Kg		93	70 - 130	2	35
Ethylbenzene			0.100	0.08850		mg/Kg		89	70 - 130	2	35
m-Xylene & p-Xylene			0.200	0.1984		mg/Kg		99	70 - 130	3	35
o-Xylene			0.100	0.1003		mg/Kg		100	70 - 130	3	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*

Lab Sample ID: 890-3662-1 MS — **Client Sample ID: SW16**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 42596 — **Prep Batch: 42514**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00201	U	0.100	0.08976		mg/Kg		90	70 - 130		
Toluene	<0.00201	U F1	0.100	0.07517		mg/Kg		75	70 - 130		
Ethylbenzene	<0.00201	U F1	0.100	0.05923	F1	mg/Kg		59	70 - 130		
m-Xylene & p-Xylene	<0.00402	U F1	0.200	0.1329	F1	mg/Kg		66	70 - 130		
o-Xylene	<0.00201	U F1	0.100	0.06702	F1	mg/Kg		67	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: 890-3662-1 MSD — **Client Sample ID: SW16**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 42596 — **Prep Batch: 42514**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U	0.0996	0.07551		mg/Kg		76	70 - 130	17	35
Toluene	<0.00201	U F1	0.0996	0.06302	F1	mg/Kg		63	70 - 130	18	35
Ethylbenzene	<0.00201	U F1	0.0996	0.04699	F1	mg/Kg		47	70 - 130	23	35
m-Xylene & p-Xylene	<0.00402	U F1	0.199	0.1036	F1	mg/Kg		52	70 - 130	25	35
o-Xylene	<0.00201	U F1	0.0996	0.05231	F1	mg/Kg		53	70 - 130	25	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*

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

Lab Sample ID: MB 880-41926/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 41982 — **Prep Batch: 41926**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		12/15/22 14:18	12/16/22 08:33	1

QC Sample Results

Client: Ensolum
Project/Site: Pickett Draw Federal

Job ID: 890-3662-1
SDG: 03E1558127

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

Lab Sample ID: MB 880-41926/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 41982 — **Prep Batch: 41926**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/15/22 14:18	12/16/22 08:33	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/15/22 14:18	12/16/22 08:33	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*112*		*70 - 130*	*12/15/22 14:18*	*12/16/22 08:33*	*1*
o-Terphenyl	*115*		*70 - 130*	*12/15/22 14:18*	*12/16/22 08:33*	*1*

Lab Sample ID: LCS 880-41926/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 41982 — **Prep Batch: 41926**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	918.4		mg/Kg		92	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	903.8		mg/Kg		90	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*98*		*70 - 130*
o-Terphenyl	*111*		*70 - 130*

Lab Sample ID: LCSD 880-41926/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 41982 — **Prep Batch: 41926**

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	14	20
Diesel Range Organics (Over C10-C28)			1000	1147	*1	mg/Kg		115	70 - 130	24	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*128*		*70 - 130*
o-Terphenyl	*134*	*S1+*	*70 - 130*

Lab Sample ID: 890-3615-A-1-E MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 41982 — **Prep Batch: 41926**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U F2	999	1283		mg/Kg		128	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U *1	999	1096		mg/Kg		110	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*109*		*70 - 130*
o-Terphenyl	*98*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: Pickett Draw Federal

Job ID: 890-3662-1
SDG: 03E1558127

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

Lab Sample ID: 890-3615-A-1-F MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 41982 — **Prep Batch: 41926**

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	<50.0	U F2	997	988.5	F2	mg/Kg		99	70 - 130	26	20
Diesel Range Organics (Over C10-C28)	<50.0	U *1	997	942.5		mg/Kg		95	70 - 130	15	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*105*		*70 - 130*
o-Terphenyl	*86*		*70 - 130*

Lab Sample ID: MB 880-42287/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 42282 — **Prep Batch: 42287**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		12/20/22 08:27	12/20/22 08:33	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		12/20/22 08:27	12/20/22 08:33	1
OIl Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		12/20/22 08:27	12/20/22 08:33	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*91*		*70 - 130*	*12/20/22 08:27*	*12/20/22 08:33*	*1*
o-Terphenyl	*95*		*70 - 130*	*12/20/22 08:27*	*12/20/22 08:33*	*1*

Lab Sample ID: LCS 880-42287/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 42282 — **Prep Batch: 42287**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	812.1		mg/Kg		81	70 - 130
Diesel Range Organics (Over C10-C28)	1000	854.3		mg/Kg		85	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*100*		*70 - 130*
o-Terphenyl	*106*		*70 - 130*

Lab Sample ID: LCSD 880-42287/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 42282 — **Prep Batch: 42287**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	854.0		mg/Kg		85	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	1000	901.1		mg/Kg		90	70 - 130	5	20

QC Sample Results

Client: Ensolum
Project/Site: Pickett Draw Federal

Job ID: 890-3662-1
SDG: 03E1558127

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

Lab Sample ID: LCSD 880-42287/3-A
Matrix: Solid
Analysis Batch: 42282

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 42287

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	105		70 - 130
o-Terphenyl	111		70 - 130

Lab Sample ID: 880-22856-A-87-B MS
Matrix: Solid
Analysis Batch: 42282

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 42287

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	999	861.8		mg/Kg		84	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U	999	733.6		mg/Kg		73	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	82		70 - 130
o-Terphenyl	74		70 - 130

Lab Sample ID: 880-22856-A-87-C MSD
Matrix: Solid
Analysis Batch: 42282

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 42287

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	<50.0	U	997	845.6		mg/Kg		83	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	<50.0	U	997	719.7		mg/Kg		72	70 - 130	2	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	80		70 - 130
o-Terphenyl	79		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-42017/1-A
Matrix: Solid
Analysis Batch: 42032

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			12/16/22 15:29	1

Lab Sample ID: LCS 880-42017/2-A
Matrix: Solid
Analysis Batch: 42032

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride			250	249.9		mg/Kg		100	90 - 110

QC Sample Results

Client: Ensolum
Project/Site: Pickett Draw Federal

Job ID: 890-3662-1
SDG: 03E1558127

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 880-42017/3-A
Matrix: Solid
Analysis Batch: 42032

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	249.2		mg/Kg		100	90 - 110	0	20

Lab Sample ID: 890-3662-1 MS
Matrix: Solid
Analysis Batch: 42032

Client Sample ID: SW16
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	537		248	777.8		mg/Kg		97	90 - 110		

Lab Sample ID: 890-3662-1 MSD
Matrix: Solid
Analysis Batch: 42032

Client Sample ID: SW16
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	537		248	776.7		mg/Kg		97	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Pickett Draw Federal

Job ID: 890-3662-1
SDG: 03E1558127

GC VOA

Prep Batch: 42487

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-42487/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 42514

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3662-1	SW16	Total/NA	Solid	5035	
890-3662-2	SW17	Total/NA	Solid	5035	
890-3662-3	SW18	Total/NA	Solid	5035	
MB 880-42514/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-42514/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-42514/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-3662-1 MS	SW16	Total/NA	Solid	5035	
890-3662-1 MSD	SW16	Total/NA	Solid	5035	

Analysis Batch: 42596

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3662-1	SW16	Total/NA	Solid	8021B	42514
890-3662-2	SW17	Total/NA	Solid	8021B	42514
890-3662-3	SW18	Total/NA	Solid	8021B	42514
MB 880-42487/5-A	Method Blank	Total/NA	Solid	8021B	42487
MB 880-42514/5-A	Method Blank	Total/NA	Solid	8021B	42514
LCS 880-42514/1-A	Lab Control Sample	Total/NA	Solid	8021B	42514
LCSD 880-42514/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	42514
890-3662-1 MS	SW16	Total/NA	Solid	8021B	42514
890-3662-1 MSD	SW16	Total/NA	Solid	8021B	42514

Analysis Batch: 42649

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3662-1	SW16	Total/NA	Solid	Total BTEX	
890-3662-2	SW17	Total/NA	Solid	Total BTEX	
890-3662-3	SW18	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 41926

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3662-1	SW16	Total/NA	Solid	8015NM Prep	
890-3662-2	SW17	Total/NA	Solid	8015NM Prep	
890-3662-3	SW18	Total/NA	Solid	8015NM Prep	
MB 880-41926/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-41926/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-41926/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-3615-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-3615-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 41982

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3662-2	SW17	Total/NA	Solid	8015B NM	41926
890-3662-3	SW18	Total/NA	Solid	8015B NM	41926
MB 880-41926/1-A	Method Blank	Total/NA	Solid	8015B NM	41926
LCS 880-41926/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	41926
LCSD 880-41926/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	41926

QC Association Summary

Client: Ensolum
Project/Site: Pickett Draw Federal

Job ID: 890-3662-1
SDG: 03E1558127

GC Semi VOA (Continued)

Analysis Batch: 41982 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3615-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	41926
890-3615-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	41926

Analysis Batch: 42055

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3662-1	SW16	Total/NA	Solid	8015 NM	
890-3662-2	SW17	Total/NA	Solid	8015 NM	
890-3662-3	SW18	Total/NA	Solid	8015 NM	

Analysis Batch: 42282

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3662-1	SW16	Total/NA	Solid	8015B NM	41926
MB 880-42287/1-A	Method Blank	Total/NA	Solid	8015B NM	42287
LCS 880-42287/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	42287
LCSD 880-42287/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	42287
880-22856-A-87-B MS	Matrix Spike	Total/NA	Solid	8015B NM	42287
880-22856-A-87-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	42287

Prep Batch: 42287

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-42287/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-42287/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-42287/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-22856-A-87-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-22856-A-87-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

HPLC/IC

Leach Batch: 42017

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3662-1	SW16	Soluble	Solid	DI Leach	
890-3662-2	SW17	Soluble	Solid	DI Leach	
890-3662-3	SW18	Soluble	Solid	DI Leach	
MB 880-42017/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-42017/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-42017/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3662-1 MS	SW16	Soluble	Solid	DI Leach	
890-3662-1 MSD	SW16	Soluble	Solid	DI Leach	

Analysis Batch: 42032

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3662-1	SW16	Soluble	Solid	300.0	42017
890-3662-2	SW17	Soluble	Solid	300.0	42017
890-3662-3	SW18	Soluble	Solid	300.0	42017
MB 880-42017/1-A	Method Blank	Soluble	Solid	300.0	42017
LCS 880-42017/2-A	Lab Control Sample	Soluble	Solid	300.0	42017
LCSD 880-42017/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	42017
890-3662-1 MS	SW16	Soluble	Solid	300.0	42017
890-3662-1 MSD	SW16	Soluble	Solid	300.0	42017

Lab Chronicle

Client: Ensolum
Project/Site: Pickett Draw Federal

Job ID: 890-3662-1
SDG: 03E1558127

Client Sample ID: SW16

Lab Sample ID: 890-3662-1
Date Collected: 12/14/22 09:50
Matrix: Solid
Date Received: 12/15/22 08:28

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	42514	12/22/22 12:14	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42596	12/26/22 23:51	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			42649	12/27/22 09:32	AJ	EET MID
Total/NA	Analysis	8015 NM		1			42055	12/16/22 14:51	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	41926	12/15/22 14:18	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	42282	12/20/22 12:04	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	42017	12/16/22 12:00	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	42032	12/16/22 15:43	CH	EET MID

Client Sample ID: SW17

Lab Sample ID: 890-3662-2
Date Collected: 12/14/22 12:45
Matrix: Solid
Date Received: 12/15/22 08:28

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	42514	12/22/22 12:14	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42596	12/27/22 00:11	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			42649	12/27/22 09:32	AJ	EET MID
Total/NA	Analysis	8015 NM		1			42055	12/16/22 14:51	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	41926	12/15/22 14:18	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	41982	12/16/22 12:55	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	42017	12/16/22 12:00	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	42032	12/16/22 16:12	CH	EET MID

Client Sample ID: SW18

Lab Sample ID: 890-3662-3
Date Collected: 12/14/22 13:00
Matrix: Solid
Date Received: 12/15/22 08:28

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	42514	12/22/22 12:14	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	42596	12/27/22 00:32	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			42649	12/27/22 09:32	AJ	EET MID
Total/NA	Analysis	8015 NM		1			42055	12/16/22 14:51	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	41926	12/15/22 14:18	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	41982	12/16/22 13:17	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	42017	12/16/22 12:00	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	42032	12/16/22 16:27	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Pickett Draw Federal

Job ID: 890-3662-1
SDG: 03E1558127

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	T104704400-22-25	06-30-23

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: Ensolum
Project/Site: Pickett Draw Federal

Job ID: 890-3662-1
SDG: 03E1558127

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	MCAWW	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

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.

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: Ensolum
Project/Site: Pickett Draw Federal

Job ID: 890-3662-1
SDG: 03E1558127

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3662-1	SW16	Solid	12/14/22 09:50	12/15/22 08:28	0 - 2.5
890-3662-2	SW17	Solid	12/14/22 12:45	12/15/22 08:28	0 - 5
890-3662-3	SW18	Solid	12/14/22 13:00	12/15/22 08:28	0 - 5

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Chain of Custody

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: _____

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Project Manager:	Tacoma Morrissey	Bill to: (if different)	Garrett Green
Company Name:	Ensolum	Company Name:	XTO Energy
Address:	3122 National Parks Hwy	Address:	3104 E. Green St.
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	303-887-2946	Email:	Garrett.Green@ExxonMobil.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:	Pickett Draw Federal #001	Turn Around	
Project Number:	03E1558127	☐ Routine	☑ Rush
Project Location:		Due Date:	24 Hour
Sampler's Name:	Connor Whitman	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	7NM007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	1.2
Total Containers:		Corrected Temperature:	1.0

ANALYSIS REQUEST

890-3662 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	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)
SW16	S	12/14/22	9:50	0-2.5'	C	1	✓	✓	✓
SW17	S		12:45	0-5'	C	1	✓	✓	✓
SW18	S		1:00	0-5'	C	1	✓	✓	✓

Sample Comments

Incident ID: NAB1919955454
Cost Center: 1081581001
AFE: EW.2019.06846.EXP.01

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		12.15.22	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3662-1
SDG Number: 03E1558127

Login Number: 3662
List Number: 1
Creator: Clifton, Cloe

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: Ensolum

Job Number: 890-3662-1
SDG Number: 03E1558127

Login Number: 3662
List Number: 2
Creator: Teel, Brianna

List Source: Eurofins Midland
List Creation: 12/16/22 11:35 AM

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	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Kalei Jennings
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 1/9/2023 11:52:52 AM

JOB DESCRIPTION

Pickett Draw Federal #001
SDG NUMBER 03E1558127

JOB NUMBER

890-3728-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

my EOL

Eurofins Carlsbad

Job Notes

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
1/9/2023 11:52:52 AM

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

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: Pickett Draw Federal #001

Job ID: 890-3728-1
SDG: 03E1558127

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
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
F1	MS and/or MSD recovery exceeds control limits.
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: Ensolum
Project/Site: Pickett Draw Federal #001

Job ID: 890-3728-1
SDG: 03E1558127

Job ID: 890-3728-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3728-1

Receipt
The samples were received on 12/30/2022 9:30 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 1.0°C

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-43267 and analytical batch 880-43325 were outside control limits for one or more analytes, see QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance 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 samples were outside control limits: (880-23145-A-1-C MS) and (880-23145-A-1-D MSD). 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
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-43076 and analytical batch 880-43096 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Client Sample Results

Client: Ensolum
Project/Site: Pickett Draw Federal #001

Job ID: 890-3728-1
SDG: 03E1558127

Client Sample ID: SW19

Lab Sample ID: 890-3728-1
Matrix: Solid

Date Collected: 12/29/22 14:10
Date Received: 12/30/22 09:30
Sample Depth: 0 - 2.5

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		01/05/23 13:12	01/06/23 19:14	1
Toluene	<0.00202	U	0.00202	mg/Kg		01/05/23 13:12	01/06/23 19:14	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		01/05/23 13:12	01/06/23 19:14	1
m-Xylene & p-Xylene	<0.00403	U	0.00403	mg/Kg		01/05/23 13:12	01/06/23 19:14	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		01/05/23 13:12	01/06/23 19:14	1
Xylenes, Total	<0.00403	U	0.00403	mg/Kg		01/05/23 13:12	01/06/23 19:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*	*01/05/23 13:12*	*01/06/23 19:14*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*01/05/23 13:12*	*01/06/23 19:14*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403	mg/Kg			01/09/23 11:44	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**1050**		49.9	mg/Kg			01/04/23 11:34	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		01/03/23 13:38	01/04/23 03:53	1
Diesel Range Organics (Over C10-C28)	**906**		49.9	mg/Kg		01/03/23 13:38	01/04/23 03:53	1
Oil Range Organics (Over C28-C36)	**147**		49.9	mg/Kg		01/03/23 13:38	01/04/23 03:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*01/03/23 13:38*	*01/04/23 03:53*	*1*
o-Terphenyl	*87*		*70 - 130*	*01/03/23 13:38*	*01/04/23 03:53*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1450**		25.3	mg/Kg			01/04/23 06:52	5

Client Sample ID: SW20

Lab Sample ID: 890-3728-2
Matrix: Solid

Date Collected: 12/29/22 15:00
Date Received: 12/30/22 09:30
Sample Depth: 0 - 5

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/05/23 13:12	01/06/23 19:35	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/05/23 13:12	01/06/23 19:35	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/05/23 13:12	01/06/23 19:35	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		01/05/23 13:12	01/06/23 19:35	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/05/23 13:12	01/06/23 19:35	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		01/05/23 13:12	01/06/23 19:35	1

Client Sample Results

Client: Ensolum
Project/Site: Pickett Draw Federal #001

Job ID: 890-3728-1
SDG: 03E1558127

Client Sample ID: SW20

Lab Sample ID: 890-3728-2
Matrix: Solid

Date Collected: 12/29/22 15:00
Date Received: 12/30/22 09:30
Sample Depth: 0 - 5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	119		70 - 130	01/05/23 13:12	01/06/23 19:35	1
1,4-Difluorobenzene (Surr)	98		70 - 130	01/05/23 13:12	01/06/23 19:35	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			01/09/23 11:44	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**854**		50.0	mg/Kg			01/04/23 11:34	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		01/03/23 13:38	01/04/23 04:15	1
Diesel Range Organics (Over C10-C28)	**504**		50.0	mg/Kg		01/03/23 13:38	01/04/23 04:15	1
Oil Range Organics (Over C28-C36)	**350**		50.0	mg/Kg		01/03/23 13:38	01/04/23 04:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	112		70 - 130	01/03/23 13:38	01/04/23 04:15	1
o-Terphenyl	99		70 - 130	01/03/23 13:38	01/04/23 04:15	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**233**		5.03	mg/Kg			01/04/23 06:57	1

Client Sample ID: FS32

Lab Sample ID: 890-3728-3
Matrix: Solid

Date Collected: 12/29/22 14:15
Date Received: 12/30/22 09:30
Sample Depth: - 2.5

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		01/05/23 13:12	01/06/23 19:55	1
Toluene	<0.00198	U	0.00198	mg/Kg		01/05/23 13:12	01/06/23 19:55	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		01/05/23 13:12	01/06/23 19:55	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		01/05/23 13:12	01/06/23 19:55	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		01/05/23 13:12	01/06/23 19:55	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		01/05/23 13:12	01/06/23 19:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	127		70 - 130	01/05/23 13:12	01/06/23 19:55	1
1,4-Difluorobenzene (Surr)	101		70 - 130	01/05/23 13:12	01/06/23 19:55	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396	mg/Kg			01/09/23 11:44	1

Client Sample Results

Client: Ensolum
Project/Site: Pickett Draw Federal #001

Job ID: 890-3728-1
SDG: 03E1558127

Client Sample ID: FS32

Lab Sample ID: 890-3728-3
Matrix: Solid

Date Collected: 12/29/22 14:15
Date Received: 12/30/22 09:30
Sample Depth: - 2.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			01/04/23 11:34	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		01/03/23 13:38	01/04/23 04:37	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/03/23 13:38	01/04/23 04:37	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/03/23 13:38	01/04/23 04:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*			*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*113*		*70 - 130*			*01/03/23 13:38*	*01/04/23 04:37*	*1*
o-Terphenyl	*108*		*70 - 130*			*01/03/23 13:38*	*01/04/23 04:37*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1620**		25.1		mg/Kg			01/04/23 08:10	5

Surrogate Summary

Client: Ensolum
Project/Site: Pickett Draw Federal #001

Job ID: 890-3728-1
SDG: 03E1558127

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-23201-A-1-H MS	Matrix Spike	102	96
880-23201-A-1-I MSD	Matrix Spike Duplicate	99	92
890-3728-1	SW19	119	101
890-3728-2	SW20	119	98
890-3728-3	FS32	127	101
LCS 880-43267/1-A	Lab Control Sample	95	95
LCSD 880-43267/2-A	Lab Control Sample Dup	97	96
MB 880-43267/5-A	Method Blank	102	87

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)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-23145-A-1-C MS	Matrix Spike	13 S1-	11 S1-
880-23145-A-1-D MSD	Matrix Spike Duplicate	14 S1-	11 S1-
890-3728-1	SW19	96	87
890-3728-2	SW20	112	99
890-3728-3	FS32	113	108
LCS 880-43083/2-A	Lab Control Sample	111	94
LCSD 880-43083/3-A	Lab Control Sample Dup	114	95
MB 880-43083/1-A	Method Blank	109	111

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Pickett Draw Federal #001

Job ID: 890-3728-1
SDG: 03E1558127

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-43267/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 43325 — **Prep Batch: 43267**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/05/23 13:12	01/06/23 10:51	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/05/23 13:12	01/06/23 10:51	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/05/23 13:12	01/06/23 10:51	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		01/05/23 13:12	01/06/23 10:51	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/05/23 13:12	01/06/23 10:51	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		01/05/23 13:12	01/06/23 10:51	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*01/05/23 13:12*	*01/06/23 10:51*	*1*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*	*01/05/23 13:12*	*01/06/23 10:51*	*1*

Lab Sample ID: LCS 880-43267/1-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 43325 — **Prep Batch: 43267**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1011		mg/Kg		101	70 - 130
Toluene	0.100	0.09684		mg/Kg		97	70 - 130
Ethylbenzene	0.100	0.08911		mg/Kg		89	70 - 130
m-Xylene & p-Xylene	0.200	0.1927		mg/Kg		96	70 - 130
o-Xylene	0.100	0.09524		mg/Kg		95	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*

Lab Sample ID: LCSD 880-43267/2-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 43325 — **Prep Batch: 43267**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1062		mg/Kg		106	70 - 130	5	35
Toluene	0.100	0.1022		mg/Kg		102	70 - 130	5	35
Ethylbenzene	0.100	0.09183		mg/Kg		92	70 - 130	3	35
m-Xylene & p-Xylene	0.200	0.1960		mg/Kg		98	70 - 130	2	35
o-Xylene	0.100	0.09738		mg/Kg		97	70 - 130	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

Lab Sample ID: 880-23201-A-1-H MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 43325 — **Prep Batch: 43267**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00199	U	0.0998	0.08556		mg/Kg		85	70 - 130
Toluene	<0.00199	U	0.0998	0.07942		mg/Kg		80	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Pickett Draw Federal #001

Job ID: 890-3728-1
SDG: 03E1558127

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

Lab Sample ID: 880-23201-A-1-H MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 43325 — **Prep Batch: 43267**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00199	U F1	0.0998	0.06868	F1	mg/Kg		69	70 - 130
m-Xylene & p-Xylene	<0.00398	U	0.200	0.1508		mg/Kg		76	70 - 130
o-Xylene	<0.00199	U	0.0998	0.07521		mg/Kg		75	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

Lab Sample ID: 880-23201-A-1-I MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 43325 — **Prep Batch: 43267**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.100	0.09575		mg/Kg		95	70 - 130	11	35
Toluene	<0.00199	U	0.100	0.08902		mg/Kg		89	70 - 130	11	35
Ethylbenzene	<0.00199	U F1	0.100	0.07687		mg/Kg		77	70 - 130	11	35
m-Xylene & p-Xylene	<0.00398	U	0.200	0.1675		mg/Kg		84	70 - 130	10	35
o-Xylene	<0.00199	U	0.100	0.08216		mg/Kg		81	70 - 130	9	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*

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

Lab Sample ID: MB 880-43083/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 43035 — **Prep Batch: 43083**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		01/03/23 13:38	01/03/23 21:01	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		01/03/23 13:38	01/03/23 21:01	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/03/23 13:38	01/03/23 21:01	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*109*		*70 - 130*	*01/03/23 13:38*	*01/03/23 21:01*	*1*
o-Terphenyl	*111*		*70 - 130*	*01/03/23 13:38*	*01/03/23 21:01*	*1*

Lab Sample ID: LCS 880-43083/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 43035 — **Prep Batch: 43083**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1005		mg/Kg		100	70 - 130
Diesel Range Organics (Over C10-C28)	1000	966.4		mg/Kg		97	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Pickett Draw Federal #001

Job ID: 890-3728-1
SDG: 03E1558127

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

Lab Sample ID: LCS 880-43083/2-A
Matrix: Solid
Analysis Batch: 43035

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 43083

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	111		70 - 130
o-Terphenyl	94		70 - 130

Lab Sample ID: LCSD 880-43083/3-A
Matrix: Solid
Analysis Batch: 43035

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 43083

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1026		mg/Kg		103	70 - 130	2	20
Diesel Range Organics (Over C10-C28)			1000	993.4		mg/Kg		99	70 - 130	3	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	114		70 - 130
o-Terphenyl	95		70 - 130

Lab Sample ID: 880-23145-A-1-C MS
Matrix: Solid
Analysis Batch: 43035

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 43083

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	999	1036		mg/Kg		101	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	999	897.6		mg/Kg		90	70 - 130		

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	13	S1-	70 - 130
o-Terphenyl	11	S1-	70 - 130

Lab Sample ID: 880-23145-A-1-D MSD
Matrix: Solid
Analysis Batch: 43035

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 43083

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	999	1040		mg/Kg		101	70 - 130	0	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	918.8		mg/Kg		92	70 - 130	2	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	14	S1-	70 - 130
o-Terphenyl	11	S1-	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Pickett Draw Federal #001

Job ID: 890-3728-1
SDG: 03E1558127

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-43076/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 43096

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			01/04/23 05:18	1

Lab Sample ID: LCS 880-43076/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 43096

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	262.3		mg/Kg		105	90 - 110		

Lab Sample ID: LCSD 880-43076/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 43096

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	264.0		mg/Kg		106	90 - 110	1	20

Lab Sample ID: 890-3727-A-2-E MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 43096

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	477	F1	248	763.7	F1	mg/Kg		116	90 - 110		

Lab Sample ID: 890-3727-A-2-F MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 43096

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	477	F1	248	766.4	F1	mg/Kg		117	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Pickett Draw Federal #001

Job ID: 890-3728-1
SDG: 03E1558127

GC VOA

Prep Batch: 43267

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3728-1	SW19	Total/NA	Solid	5035	
890-3728-2	SW20	Total/NA	Solid	5035	
890-3728-3	FS32	Total/NA	Solid	5035	
MB 880-43267/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-43267/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-43267/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-23201-A-1-H MS	Matrix Spike	Total/NA	Solid	5035	
880-23201-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 43325

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3728-1	SW19	Total/NA	Solid	8021B	43267
890-3728-2	SW20	Total/NA	Solid	8021B	43267
890-3728-3	FS32	Total/NA	Solid	8021B	43267
MB 880-43267/5-A	Method Blank	Total/NA	Solid	8021B	43267
LCS 880-43267/1-A	Lab Control Sample	Total/NA	Solid	8021B	43267
LCSD 880-43267/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	43267
880-23201-A-1-H MS	Matrix Spike	Total/NA	Solid	8021B	43267
880-23201-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	43267

Analysis Batch: 43527

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3728-1	SW19	Total/NA	Solid	Total BTEX	
890-3728-2	SW20	Total/NA	Solid	Total BTEX	
890-3728-3	FS32	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 43035

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3728-1	SW19	Total/NA	Solid	8015B NM	43083
890-3728-2	SW20	Total/NA	Solid	8015B NM	43083
890-3728-3	FS32	Total/NA	Solid	8015B NM	43083
MB 880-43083/1-A	Method Blank	Total/NA	Solid	8015B NM	43083
LCS 880-43083/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	43083
LCSD 880-43083/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	43083
880-23145-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	43083
880-23145-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	43083

Prep Batch: 43083

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3728-1	SW19	Total/NA	Solid	8015NM Prep	
890-3728-2	SW20	Total/NA	Solid	8015NM Prep	
890-3728-3	FS32	Total/NA	Solid	8015NM Prep	
MB 880-43083/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-43083/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-43083/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-23145-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-23145-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: Pickett Draw Federal #001

Job ID: 890-3728-1
SDG: 03E1558127

GC Semi VOA

Analysis Batch: 43141

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3728-1	SW19	Total/NA	Solid	8015 NM	
890-3728-2	SW20	Total/NA	Solid	8015 NM	
890-3728-3	FS32	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 43076

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3728-1	SW19	Soluble	Solid	DI Leach	
890-3728-2	SW20	Soluble	Solid	DI Leach	
890-3728-3	FS32	Soluble	Solid	DI Leach	
MB 880-43076/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-43076/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-43076/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3727-A-2-E MS	Matrix Spike	Soluble	Solid	DI Leach	
890-3727-A-2-F MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 43096

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3728-1	SW19	Soluble	Solid	300.0	43076
890-3728-2	SW20	Soluble	Solid	300.0	43076
890-3728-3	FS32	Soluble	Solid	300.0	43076
MB 880-43076/1-A	Method Blank	Soluble	Solid	300.0	43076
LCS 880-43076/2-A	Lab Control Sample	Soluble	Solid	300.0	43076
LCSD 880-43076/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	43076
890-3727-A-2-E MS	Matrix Spike	Soluble	Solid	300.0	43076
890-3727-A-2-F MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	43076

Lab Chronicle

Client: Ensolum
Project/Site: Pickett Draw Federal #001

Job ID: 890-3728-1
SDG: 03E1558127

Client Sample ID: SW19

Lab Sample ID: 890-3728-1
Date Collected: 12/29/22 14:10
Matrix: Solid
Date Received: 12/30/22 09:30

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	43267	01/05/23 13:12	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43325	01/06/23 19:14	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43527	01/09/23 11:44	AJ	EET MID
Total/NA	Analysis	8015 NM		1			43141	01/04/23 11:34	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	43083	01/03/23 13:38	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43035	01/04/23 03:53	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	43076	01/03/23 12:06	KS	EET MID
Soluble	Analysis	300.0		5			43096	01/04/23 06:52	CH	EET MID

Client Sample ID: SW20

Lab Sample ID: 890-3728-2
Date Collected: 12/29/22 15:00
Matrix: Solid
Date Received: 12/30/22 09:30

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	43267	01/05/23 13:12	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43325	01/06/23 19:35	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43527	01/09/23 11:44	AJ	EET MID
Total/NA	Analysis	8015 NM		1			43141	01/04/23 11:34	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	43083	01/03/23 13:38	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43035	01/04/23 04:15	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	43076	01/03/23 12:06	KS	EET MID
Soluble	Analysis	300.0		1			43096	01/04/23 06:57	CH	EET MID

Client Sample ID: FS32

Lab Sample ID: 890-3728-3
Date Collected: 12/29/22 14:15
Matrix: Solid
Date Received: 12/30/22 09:30

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	43267	01/05/23 13:12	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	43325	01/06/23 19:55	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			43527	01/09/23 11:44	AJ	EET MID
Total/NA	Analysis	8015 NM		1			43141	01/04/23 11:34	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	43083	01/03/23 13:38	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	43035	01/04/23 04:37	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	43076	01/03/23 12:06	KS	EET MID
Soluble	Analysis	300.0		5			43096	01/04/23 08:10	CH	EET MID

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Pickett Draw Federal #001

Job ID: 890-3728-1
SDG: 03E1558127

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	T104704400-22-25	06-30-23

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: Ensolum
Project/Site: Pickett Draw Federal #001

Job ID: 890-3728-1
SDG: 03E1558127

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	MCAWW	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

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.

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: Ensolum
Project/Site: Pickett Draw Federal #001

Job ID: 890-3728-1
SDG: 03E1558127

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3728-1	SW19	Solid	12/29/22 14:10	12/30/22 09:30	0 - 2.5
890-3728-2	SW20	Solid	12/29/22 15:00	12/30/22 09:30	0 - 5
890-3728-3	FS32	Solid	12/29/22 14:15	12/30/22 09:30	- 2.5

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Chain of Custody

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

www.xenco.com

Work Order No: _____

Page 1 of 1

Project Manager:	Tacoma Morrissey	Bill to: (if different)	Garrett Green
Company Name:	Ensolum	Company Name:	XTO Energy
Address:	3122 National Parks Hwy	Address:	3104 E. Green St.
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	303-887-2946	Email:	Garrett.Green@ExxonMobil.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:	Pickett Draw Federal #001	Turn Around	
Project Number:	03E1558127	☑ Routine ☐ Rush	
Project Location:		Due Date:	
Sampler's Name:	Connor Whitman	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	IR M007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	1.2
Total Containers:		Corrected Temperature:	1.0

ANALYSIS REQUEST

890-3728 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)
SW19	S	12/29/22	2:10	0-2.5'	C	1	✓	✓	✓
SW20	S	/	3:00	0-5'	C	1	✓	✓	✓
FS 32	S	/	2:15	2.5'	C	1	✓	✓	✓

Pres. Code / Parameters

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 Comments

Incident ID:
NAB1919955454
Cost Center:
1081581001
AFE:
EW.2019.06846.EXP.01

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		12-30-22 930	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev: 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3728-1
SDG Number: 03E1558127

Login Number: 3728
List Number: 1
Creator: Clifton, Cloe

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: Ensolum

Job Number: 890-3728-1
SDG Number: 03E1558127

Login Number: 3728
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 01/03/23 09:51 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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ANALYTICAL REPORT

PREPARED FOR

Attn: Tacoma Morrissey
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 1/20/2023 11:23:11 AM

JOB DESCRIPTION

Pickett Draw Fed #001
SDG NUMBER 03E1558127

JOB NUMBER

890-3873-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

my EOL

Eurofins Carlsbad

Job Notes

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
1/20/2023 11:23:11 AM

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

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: Pickett Draw Fed #001

Job ID: 890-3873-1
SDG: 03E1558127

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high 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: Ensolum
Project/Site: Pickett Draw Fed #001

Job ID: 890-3873-1
SDG: 03E1558127

Job ID: 890-3873-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-3873-1

Receipt
The samples were received on 1/17/2023 3:03 PM. 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 5.2°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: SW21 (890-3873-1), SW22 (890-3873-2) and FS33 (890-3873-3).

GC VOA
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: (LCS 880-44313/2-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: The method blank for preparation batch 880-44313 and analytical batch 880-44307 contained Diesel Range Organics (Over C10-C28) above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples 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: Ensolum
Project/Site: Pickett Draw Fed #001

Job ID: 890-3873-1
SDG: 03E1558127

Client Sample ID: SW21

Lab Sample ID: 890-3873-1
Matrix: Solid

Date Collected: 01/17/23 10:30
Date Received: 01/17/23 15:03
Sample Depth: 0 - 5

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/18/23 16:20	01/19/23 13:05	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/18/23 16:20	01/19/23 13:05	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/18/23 16:20	01/19/23 13:05	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		01/18/23 16:20	01/19/23 13:05	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/18/23 16:20	01/19/23 13:05	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		01/18/23 16:20	01/19/23 13:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*	*01/18/23 16:20*	*01/19/23 13:05*	*1*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*	*01/18/23 16:20*	*01/19/23 13:05*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			01/19/23 17:02	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**75.2**		50.0	mg/Kg			01/20/23 11:57	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		01/19/23 08:35	01/19/23 12:29	1
Diesel Range Organics (Over C10-C28)	**75.2**		50.0	mg/Kg		01/19/23 08:35	01/19/23 12:29	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/19/23 08:35	01/19/23 12:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*89*		*70 - 130*	*01/19/23 08:35*	*01/19/23 12:29*	*1*
o-Terphenyl	*83*		*70 - 130*	*01/19/23 08:35*	*01/19/23 12:29*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**472**		5.03	mg/Kg			01/19/23 15:39	1

Client Sample ID: SW22

Lab Sample ID: 890-3873-2
Matrix: Solid

Date Collected: 01/17/23 12:25
Date Received: 01/17/23 15:03
Sample Depth: 0 - 2.5

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		01/18/23 16:20	01/19/23 13:26	1
Toluene	<0.00201	U	0.00201	mg/Kg		01/18/23 16:20	01/19/23 13:26	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		01/18/23 16:20	01/19/23 13:26	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		01/18/23 16:20	01/19/23 13:26	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		01/18/23 16:20	01/19/23 13:26	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		01/18/23 16:20	01/19/23 13:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*	*01/18/23 16:20*	*01/19/23 13:26*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Pickett Draw Fed #001

Job ID: 890-3873-1
SDG: 03E1558127

Client Sample ID: SW22

Lab Sample ID: 890-3873-2
Matrix: Solid

Date Collected: 01/17/23 12:25
Date Received: 01/17/23 15:03
Sample Depth: 0 - 2.5

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	112		70 - 130	01/18/23 16:20	01/19/23 13:26	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			01/19/23 17:02	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			01/20/23 11:57	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		01/19/23 08:35	01/19/23 12:51	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		01/19/23 08:35	01/19/23 12:51	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		01/19/23 08:35	01/19/23 12:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	103		70 - 130	01/19/23 08:35	01/19/23 12:51	1
o-Terphenyl	92		70 - 130	01/19/23 08:35	01/19/23 12:51	1

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3000**		25.0	mg/Kg			01/19/23 15:58	5

Client Sample ID: FS33

Lab Sample ID: 890-3873-3
Matrix: Solid

Date Collected: 01/17/23 12:30
Date Received: 01/17/23 15:03
Sample Depth: 2.5

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/18/23 16:20	01/19/23 13:47	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/18/23 16:20	01/19/23 13:47	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/18/23 16:20	01/19/23 13:47	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		01/18/23 16:20	01/19/23 13:47	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/18/23 16:20	01/19/23 13:47	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		01/18/23 16:20	01/19/23 13:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	121		70 - 130	01/18/23 16:20	01/19/23 13:47	1
1,4-Difluorobenzene (Surr)	115		70 - 130	01/18/23 16:20	01/19/23 13:47	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			01/19/23 17:02	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**1450**		49.9	mg/Kg			01/20/23 11:57	1

Client Sample Results

Client: Ensolum
Project/Site: Pickett Draw Fed #001

Job ID: 890-3873-1
SDG: 03E1558127

Client Sample ID: FS33

Lab Sample ID: 890-3873-3
Matrix: Solid

Date Collected: 01/17/23 12:30
Date Received: 01/17/23 15:03
Sample Depth: 2.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		01/19/23 08:35	01/19/23 13:13	1
Diesel Range Organics (Over C10-C28)	**1450**		49.9		mg/Kg		01/19/23 08:35	01/19/23 13:13	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		01/19/23 08:35	01/19/23 13:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*113*		*70 - 130*	*01/19/23 08:35*	*01/19/23 13:13*	*1*
o-Terphenyl	*105*		*70 - 130*	*01/19/23 08:35*	*01/19/23 13:13*	*1*

Method: MCAWW 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1390**		24.9		mg/Kg			01/19/23 16:04	5

Surrogate Summary

Client: Ensolum
Project/Site: Pickett Draw Fed #001

Job ID: 890-3873-1
SDG: 03E1558127

Method: 8021B - Volatile Organic Compounds (GC)

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

Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-23861-A-1-A MS	Matrix Spike	113	87
880-23861-A-1-B MSD	Matrix Spike Duplicate	93	103
890-3873-1	SW21	115	108
890-3873-2	SW22	114	112
890-3873-3	FS33	121	115
LCS 880-44290/1-A	Lab Control Sample	89	98
LCSD 880-44290/2-A	Lab Control Sample Dup	93	102
MB 880-44290/5-A	Method Blank	88	97

Percent Surrogate Recovery (Acceptance Limits)

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**

Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-23720-A-61-E MS	Matrix Spike	106	90
880-23720-A-61-F MSD	Matrix Spike Duplicate	90	78
890-3873-1	SW21	89	83
890-3873-2	SW22	103	92
890-3873-3	FS33	113	105
LCS 880-44313/2-A	Lab Control Sample	202 S1+	196 S1+
LCSD 880-44313/3-A	Lab Control Sample Dup	121	118
MB 880-44313/1-A	Method Blank	106	105

Percent Surrogate Recovery (Acceptance Limits)

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Pickett Draw Fed #001

Job ID: 890-3873-1
SDG: 03E1558127

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-44290/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 44311 — **Prep Batch: 44290**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/18/23 16:20	01/19/23 11:20	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/18/23 16:20	01/19/23 11:20	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/18/23 16:20	01/19/23 11:20	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		01/18/23 16:20	01/19/23 11:20	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/18/23 16:20	01/19/23 11:20	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/18/23 16:20	01/19/23 11:20	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*70 - 130*	*01/18/23 16:20*	*01/19/23 11:20*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*01/18/23 16:20*	*01/19/23 11:20*	*1*

Lab Sample ID: LCS 880-44290/1-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 44311 — **Prep Batch: 44290**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1090		mg/Kg		109	70 - 130		
Toluene			0.100	0.1012		mg/Kg		101	70 - 130		
Ethylbenzene			0.100	0.1080		mg/Kg		108	70 - 130		
m-Xylene & p-Xylene			0.200	0.1965		mg/Kg		98	70 - 130		
o-Xylene			0.100	0.09984		mg/Kg		100	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*

Lab Sample ID: LCSD 880-44290/2-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 44311 — **Prep Batch: 44290**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1103		mg/Kg		110	70 - 130	1	35
Toluene			0.100	0.1026		mg/Kg		103	70 - 130	1	35
Ethylbenzene			0.100	0.1118		mg/Kg		112	70 - 130	3	35
m-Xylene & p-Xylene			0.200	0.2046		mg/Kg		102	70 - 130	4	35
o-Xylene			0.100	0.1041		mg/Kg		104	70 - 130	4	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: 880-23861-A-1-A MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 44311 — **Prep Batch: 44290**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00201	U	0.100	0.07154		mg/Kg		71	70 - 130		
Toluene	<0.00201	U	0.100	0.08808		mg/Kg		88	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Pickett Draw Fed #001

Job ID: 890-3873-1
SDG: 03E1558127

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

Lab Sample ID: 880-23861-A-1-A MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 44311 — **Prep Batch: 44290**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00201	U	0.100	0.1254		mg/Kg		125	70 - 130
m-Xylene & p-Xylene	<0.00402	U	0.200	0.2249		mg/Kg		111	70 - 130
o-Xylene	<0.00201	U	0.100	0.1122		mg/Kg		110	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*

Lab Sample ID: 880-23861-A-1-B MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 44311 — **Prep Batch: 44290**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U	0.0990	0.09766		mg/Kg		99	70 - 130	31	35
Toluene	<0.00201	U	0.0990	0.08982		mg/Kg		91	70 - 130	2	35
Ethylbenzene	<0.00201	U	0.0990	0.09844		mg/Kg		99	70 - 130	24	35
m-Xylene & p-Xylene	<0.00402	U	0.198	0.1823		mg/Kg		91	70 - 130	21	35
o-Xylene	<0.00201	U	0.0990	0.09234		mg/Kg		92	70 - 130	19	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

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

Lab Sample ID: MB 880-44313/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 44307 — **Prep Batch: 44313**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		01/19/23 08:05	01/19/23 08:23	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		01/19/23 08:05	01/19/23 08:23	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/19/23 08:05	01/19/23 08:23	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*106*		*70 - 130*	*01/19/23 08:05*	*01/19/23 08:23*	*1*
o-Terphenyl	*105*		*70 - 130*	*01/19/23 08:05*	*01/19/23 08:23*	*1*

Lab Sample ID: LCS 880-44313/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 44307 — **Prep Batch: 44313**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1095		mg/Kg		109	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1115		mg/Kg		112	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Pickett Draw Fed #001

Job ID: 890-3873-1
SDG: 03E1558127

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

Lab Sample ID: LCS 880-44313/2-A
Matrix: Solid
Analysis Batch: 44307

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 44313

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	202	S1+	70 - 130
o-Terphenyl	196	S1+	70 - 130

Lab Sample ID: LCSD 880-44313/3-A
Matrix: Solid
Analysis Batch: 44307

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 44313

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	988.4		mg/Kg		99	70 - 130	10	20
Diesel Range Organics (Over C10-C28)			1000	995.3		mg/Kg		100	70 - 130	11	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	121		70 - 130
o-Terphenyl	118		70 - 130

Lab Sample ID: 880-23720-A-61-E MS
Matrix: Solid
Analysis Batch: 44307

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 44313

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	998	1016		mg/Kg		99	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	998	1053		mg/Kg		105	70 - 130		

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	106		70 - 130
o-Terphenyl	90		70 - 130

Lab Sample ID: 880-23720-A-61-F MSD
Matrix: Solid
Analysis Batch: 44307

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 44313

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	997	947.1		mg/Kg		92	70 - 130	7	20
Diesel Range Organics (Over C10-C28)	<49.9	U	997	922.3		mg/Kg		93	70 - 130	13	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	90		70 - 130
o-Terphenyl	78		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Pickett Draw Fed #001

Job ID: 890-3873-1
SDG: 03E1558127

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-44317/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 44370

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			01/19/23 15:20	1

Lab Sample ID: LCS 880-44317/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 44370

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	259.6		mg/Kg		104	90 - 110		

Lab Sample ID: LCSD 880-44317/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 44370

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	260.0		mg/Kg		104	90 - 110	0	20

Lab Sample ID: 890-3873-1 MS — **Client Sample ID: SW21**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 44370

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	472		252	737.3		mg/Kg		105	90 - 110		

Lab Sample ID: 890-3873-1 MSD — **Client Sample ID: SW21**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 44370

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	472		252	732.9		mg/Kg		104	90 - 110	1	20

QC Association Summary

Client: Ensolum
Project/Site: Pickett Draw Fed #001

Job ID: 890-3873-1
SDG: 03E1558127

GC VOA

Prep Batch: 44290

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3873-1	SW21	Total/NA	Solid	5035	
890-3873-2	SW22	Total/NA	Solid	5035	
890-3873-3	FS33	Total/NA	Solid	5035	
MB 880-44290/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-44290/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-44290/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-23861-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
880-23861-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 44311

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3873-1	SW21	Total/NA	Solid	8021B	44290
890-3873-2	SW22	Total/NA	Solid	8021B	44290
890-3873-3	FS33	Total/NA	Solid	8021B	44290
MB 880-44290/5-A	Method Blank	Total/NA	Solid	8021B	44290
LCS 880-44290/1-A	Lab Control Sample	Total/NA	Solid	8021B	44290
LCSD 880-44290/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	44290
880-23861-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	44290
880-23861-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	44290

Analysis Batch: 44398

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3873-1	SW21	Total/NA	Solid	Total BTEX	
890-3873-2	SW22	Total/NA	Solid	Total BTEX	
890-3873-3	FS33	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 44307

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3873-1	SW21	Total/NA	Solid	8015B NM	44313
890-3873-2	SW22	Total/NA	Solid	8015B NM	44313
890-3873-3	FS33	Total/NA	Solid	8015B NM	44313
MB 880-44313/1-A	Method Blank	Total/NA	Solid	8015B NM	44313
LCS 880-44313/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	44313
LCSD 880-44313/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	44313
880-23720-A-61-E MS	Matrix Spike	Total/NA	Solid	8015B NM	44313
880-23720-A-61-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	44313

Prep Batch: 44313

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3873-1	SW21	Total/NA	Solid	8015NM Prep	
890-3873-2	SW22	Total/NA	Solid	8015NM Prep	
890-3873-3	FS33	Total/NA	Solid	8015NM Prep	
MB 880-44313/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-44313/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-44313/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-23720-A-61-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-23720-A-61-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: Pickett Draw Fed #001

Job ID: 890-3873-1
SDG: 03E1558127

GC Semi VOA

Analysis Batch: 44444

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3873-1	SW21	Total/NA	Solid	8015 NM	
890-3873-2	SW22	Total/NA	Solid	8015 NM	
890-3873-3	FS33	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 44317

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3873-1	SW21	Soluble	Solid	DI Leach	
890-3873-2	SW22	Soluble	Solid	DI Leach	
890-3873-3	FS33	Soluble	Solid	DI Leach	
MB 880-44317/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-44317/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-44317/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-3873-1 MS	SW21	Soluble	Solid	DI Leach	
890-3873-1 MSD	SW21	Soluble	Solid	DI Leach	

Analysis Batch: 44370

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-3873-1	SW21	Soluble	Solid	300.0	44317
890-3873-2	SW22	Soluble	Solid	300.0	44317
890-3873-3	FS33	Soluble	Solid	300.0	44317
MB 880-44317/1-A	Method Blank	Soluble	Solid	300.0	44317
LCS 880-44317/2-A	Lab Control Sample	Soluble	Solid	300.0	44317
LCSD 880-44317/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	44317
890-3873-1 MS	SW21	Soluble	Solid	300.0	44317
890-3873-1 MSD	SW21	Soluble	Solid	300.0	44317

Lab Chronicle

Client: Ensolum
Project/Site: Pickett Draw Fed #001

Job ID: 890-3873-1
SDG: 03E1558127

Client Sample ID: SW21

Lab Sample ID: 890-3873-1
Date Collected: 01/17/23 10:30
Matrix: Solid
Date Received: 01/17/23 15:03

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	44290	01/18/23 16:20	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	44311	01/19/23 13:05	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			44398	01/19/23 17:02	AJ	EET MID
Total/NA	Analysis	8015 NM		1			44444	01/20/23 11:57	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	44313	01/19/23 08:35	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	44307	01/19/23 12:29	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	44317	01/19/23 10:18	KS	EET MID
Soluble	Analysis	300.0		1			44370	01/19/23 15:39	CH	EET MID

Client Sample ID: SW22

Lab Sample ID: 890-3873-2
Date Collected: 01/17/23 12:25
Matrix: Solid
Date Received: 01/17/23 15:03

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	44290	01/18/23 16:20	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	44311	01/19/23 13:26	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			44398	01/19/23 17:02	AJ	EET MID
Total/NA	Analysis	8015 NM		1			44444	01/20/23 11:57	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	44313	01/19/23 08:35	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	44307	01/19/23 12:51	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	44317	01/19/23 10:18	KS	EET MID
Soluble	Analysis	300.0		5			44370	01/19/23 15:58	CH	EET MID

Client Sample ID: FS33

Lab Sample ID: 890-3873-3
Date Collected: 01/17/23 12:30
Matrix: Solid
Date Received: 01/17/23 15:03

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	44290	01/18/23 16:20	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	44311	01/19/23 13:47	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			44398	01/19/23 17:02	AJ	EET MID
Total/NA	Analysis	8015 NM		1			44444	01/20/23 11:57	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	44313	01/19/23 08:35	DM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	44307	01/19/23 13:13	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	44317	01/19/23 10:18	KS	EET MID
Soluble	Analysis	300.0		5			44370	01/19/23 16:04	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Pickett Draw Fed #001

Job ID: 890-3873-1
SDG: 03E1558127

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	T104704400-22-25	06-30-23

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: Ensolum
Project/Site: Pickett Draw Fed #001

Job ID: 890-3873-1
SDG: 03E1558127

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	MCAWW	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

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.

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: Ensolum
Project/Site: Pickett Draw Fed #001

Job ID: 890-3873-1
SDG: 03E1558127

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-3873-1	SW21	Solid	01/17/23 10:30	01/17/23 15:03	0 - 5
890-3873-2	SW22	Solid	01/17/23 12:25	01/17/23 15:03	0 - 2.5
890-3873-3	FS33	Solid	01/17/23 12:30	01/17/23 15:03	2.5

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Environment Testing
Xenco

Chain of Custody

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 1 of 1

Project Manager:	Tacoma Morrissey	Bill to: (if different)	Garrett Green
Company Name:	Ensolum	Company Name:	XTO Energy
Address:	3122 National Parks Hwy	Address:	3104 E. Green St.
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	303-887-2946	Email:	Garrett.Green@ExxonMobil.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:	Pickett Draw Fed #001	Turn Around	
Project Number:	03E1558127	☐ Routine ☑ Rush	
Project Location:		Due Date:	24H
Sampler's Name:	Connor Whitman	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT

Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	IR m007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	5.4
Total Containers:		Corrected Temperature:	5.2

ANALYSIS REQUEST

Pres. Code

Parameters: CHLORIDES (EPA: 300.0), TPH (8015), BTEX (8021)

890-3873 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)
SW21	S	1/17/23	10:30	0-5'	C	1	/	/	/
SW22	S		12:25	0-25'	C	1	/	/	/
FS33	S		12:30	2.5'	C	1	/	/	/

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 Comments

Incident ID:
NAB1919955454
Cost Center:
1081581001
AFE:
PA.2021.03254.EXP.01

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		1-17-23 1503	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-3873-1
SDG Number: 03E1558127

Login Number: 3873
List Number: 1
Creator: Clifton, Cloe

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: Ensolum

Job Number: 890-3873-1
SDG Number: 03E1558127

Login Number: 3873
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 01/19/23 12:02 PM

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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ANALYTICAL REPORT

PREPARED FOR

Attn: Tacoma Morrissey
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 3/16/2023 8:43:04 AM

JOB DESCRIPTION

Pickett Draw Federal #001
SDG NUMBER 03E1558127

JOB NUMBER

890-4228-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

my EOL

Eurofins Carlsbad

Job Notes

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
3/16/2023 8:43:04 AM

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

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: Pickett Draw Federal #001

Job ID: 890-4228-1
SDG: 03E1558127

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
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: Ensolum
Project/Site: Pickett Draw Federal #001

Job ID: 890-4228-1
SDG: 03E1558127

Job ID: 890-4228-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4228-1

Receipt
The sample was received on 3/2/2023 2:03 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.2°C

Receipt Exceptions
The following sample was received and analyzed from an unpreserved bulk soil jar: FS33A (890-4228-1).

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-48643 and analytical batch 880-48640 were outside control limits for one or more analytes, see QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

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

GC Semi VOA
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: Ensolum
Project/Site: Pickett Draw Federal #001

Job ID: 890-4228-1
SDG: 03E1558127

Client Sample ID: FS33A

Date Collected: 03/02/23 09:30
Date Received: 03/02/23 14:03
Sample Depth: 3.5'

Lab Sample ID: 890-4228-1

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/15/23 09:14	03/16/23 06:50	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/15/23 09:14	03/16/23 06:50	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/15/23 09:14	03/16/23 06:50	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		03/15/23 09:14	03/16/23 06:50	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/15/23 09:14	03/16/23 06:50	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		03/15/23 09:14	03/16/23 06:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*79*		*70 - 130*	*03/15/23 09:14*	*03/16/23 06:50*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*03/15/23 09:14*	*03/16/23 06:50*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			03/16/23 09:31	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			03/09/23 11:59	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		03/08/23 10:30	03/09/23 05:52	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		03/08/23 10:30	03/09/23 05:52	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		03/08/23 10:30	03/09/23 05:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*75*		*70 - 130*	*03/08/23 10:30*	*03/09/23 05:52*	*1*
o-Terphenyl	*80*		*70 - 130*	*03/08/23 10:30*	*03/09/23 05:52*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**412**		5.00		mg/Kg			03/06/23 22:04	1

Surrogate Summary

Client: Ensolum
Project/Site: Pickett Draw Federal #001

Job ID: 890-4228-1
SDG: 03E1558127

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-4228-1	FS33A	79	91
890-4249-A-1-G MS	Matrix Spike	87	89
890-4249-A-1-I MSD	Matrix Spike Duplicate	105	99
LCS 880-48643/1-A	Lab Control Sample	102	104
LCSD 880-48643/2-A	Lab Control Sample Dup	106	105
MB 880-48339/5-A	Method Blank	93	89
MB 880-48643/5-A	Method Blank	94	86

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)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-4228-1	FS33A	75	80
890-4231-A-16-C MS	Matrix Spike	116	117
890-4231-A-16-D MSD	Matrix Spike Duplicate	124	117
LCS 880-48107/2-A	Lab Control Sample	105	116
LCSD 880-48107/3-A	Lab Control Sample Dup	119	118
MB 880-48107/1-A	Method Blank	103	110

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Pickett Draw Federal #001

Job ID: 890-4228-1
SDG: 03E1558127

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-48339/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 48640 — **Prep Batch: 48339**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/10/23 15:05	03/15/23 11:56	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/10/23 15:05	03/15/23 11:56	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/10/23 15:05	03/15/23 11:56	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		03/10/23 15:05	03/15/23 11:56	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/10/23 15:05	03/15/23 11:56	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		03/10/23 15:05	03/15/23 11:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*	*03/10/23 15:05*	*03/15/23 11:56*	*1*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*	*03/10/23 15:05*	*03/15/23 11:56*	*1*

Lab Sample ID: MB 880-48643/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 48640 — **Prep Batch: 48643**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/15/23 09:14	03/16/23 00:06	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/15/23 09:14	03/16/23 00:06	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/15/23 09:14	03/16/23 00:06	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		03/15/23 09:14	03/16/23 00:06	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/15/23 09:14	03/16/23 00:06	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		03/15/23 09:14	03/16/23 00:06	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*	*03/15/23 09:14*	*03/16/23 00:06*	*1*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*	*03/15/23 09:14*	*03/16/23 00:06*	*1*

Lab Sample ID: LCS 880-48643/1-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 48640 — **Prep Batch: 48643**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09028		mg/Kg		90	70 - 130		
Toluene			0.100	0.08927		mg/Kg		89	70 - 130		
Ethylbenzene			0.100	0.08363		mg/Kg		84	70 - 130		
m-Xylene & p-Xylene			0.200	0.1717		mg/Kg		86	70 - 130		
o-Xylene			0.100	0.08741		mg/Kg		87	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: LCSD 880-48643/2-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 48640 — **Prep Batch: 48643**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09850		mg/Kg		99	70 - 130	9	35

QC Sample Results

Client: Ensolum
Project/Site: Pickett Draw Federal #001

Job ID: 890-4228-1
SDG: 03E1558127

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

Lab Sample ID: LCSD 880-48643/2-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 48640 — **Prep Batch: 48643**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.09907		mg/Kg		99	70 - 130	10	35
Ethylbenzene			0.100	0.09311		mg/Kg		93	70 - 130	11	35
m-Xylene & p-Xylene			0.200	0.1905		mg/Kg		95	70 - 130	10	35
o-Xylene			0.100	0.09623		mg/Kg		96	70 - 130	10	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

Lab Sample ID: 890-4249-A-1-G MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 48640 — **Prep Batch: 48643**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00202	U F1 F2	0.0998	0.03234	F1	mg/Kg		32	70 - 130		
Toluene	<0.00202	U F1 F2	0.0998	0.03694	F1	mg/Kg		37	70 - 130		
Ethylbenzene	<0.00202	U F1 F2	0.0998	0.02625	F1	mg/Kg		26	70 - 130		
m-Xylene & p-Xylene	<0.00403	U F1 F2	0.200	0.06493	F1	mg/Kg		32	70 - 130		
o-Xylene	<0.00202	U F1 F2	0.0998	0.03430	F1	mg/Kg		33	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*87*		*70 - 130*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*

Lab Sample ID: 890-4249-A-1-I MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 48640 — **Prep Batch: 48643**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U F1 F2	0.100	0.06109	F1 F2	mg/Kg		60	70 - 130	62	35
Toluene	<0.00202	U F1 F2	0.100	0.06229	F1 F2	mg/Kg		62	70 - 130	51	35
Ethylbenzene	<0.00202	U F1 F2	0.100	0.04892	F1 F2	mg/Kg		48	70 - 130	60	35
m-Xylene & p-Xylene	<0.00403	U F1 F2	0.201	0.1136	F1 F2	mg/Kg		56	70 - 130	55	35
o-Xylene	<0.00202	U F1 F2	0.100	0.05862	F1 F2	mg/Kg		57	70 - 130	52	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

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

Lab Sample ID: MB 880-48107/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 48081 — **Prep Batch: 48107**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/08/23 10:30	03/08/23 20:50	1

QC Sample Results

Client: Ensolum
Project/Site: Pickett Draw Federal #001

Job ID: 890-4228-1
SDG: 03E1558127

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

Lab Sample ID: MB 880-48107/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 48081 — **Prep Batch: 48107**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		03/08/23 10:30	03/08/23 20:50	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/08/23 10:30	03/08/23 20:50	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*103*		*70 - 130*	*03/08/23 10:30*	*03/08/23 20:50*	*1*
o-Terphenyl	*110*		*70 - 130*	*03/08/23 10:30*	*03/08/23 20:50*	*1*

Lab Sample ID: LCS 880-48107/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 48081 — **Prep Batch: 48107**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	951.6		mg/Kg		95	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1208		mg/Kg		121	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*105*		*70 - 130*
o-Terphenyl	*116*		*70 - 130*

Lab Sample ID: LCSD 880-48107/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 48081 — **Prep Batch: 48107**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	941.9		mg/Kg		94	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	1154		mg/Kg		115	70 - 130	5	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*119*		*70 - 130*
o-Terphenyl	*118*		*70 - 130*

Lab Sample ID: 890-4231-A-16-C MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 48081 — **Prep Batch: 48107**

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	998	1008		mg/Kg		97	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	998	988.9		mg/Kg		99	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*116*		*70 - 130*
o-Terphenyl	*117*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: Pickett Draw Federal #001

Job ID: 890-4228-1
SDG: 03E1558127

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

Lab Sample ID: 890-4231-A-16-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 48081 — **Prep Batch: 48107**

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	999	947.7		mg/Kg		91	70 - 130	6	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	994.0		mg/Kg		99	70 - 130	1	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*124*		*70 - 130*
o-Terphenyl	*117*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-47840/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 47996

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			03/06/23 19:00	1

Lab Sample ID: LCS 880-47840/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 47996

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	241.1		mg/Kg		96	90 - 110		

Lab Sample ID: LCSD 880-47840/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 47996

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	241.0		mg/Kg		96	90 - 110	0	20

Lab Sample ID: 890-4223-A-1-B MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 47996

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	88.5		252	342.2		mg/Kg		101	90 - 110		

Lab Sample ID: 890-4223-A-1-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 47996

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	88.5		252	342.3		mg/Kg		101	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Pickett Draw Federal #001

Job ID: 890-4228-1
SDG: 03E1558127

GC VOA

Prep Batch: 48339

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-48339/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 48640

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4228-1	FS33A	Total/NA	Solid	8021B	48643
MB 880-48339/5-A	Method Blank	Total/NA	Solid	8021B	48339
MB 880-48643/5-A	Method Blank	Total/NA	Solid	8021B	48643
LCS 880-48643/1-A	Lab Control Sample	Total/NA	Solid	8021B	48643
LCSD 880-48643/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	48643
890-4249-A-1-G MS	Matrix Spike	Total/NA	Solid	8021B	48643
890-4249-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	48643

Prep Batch: 48643

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4228-1	FS33A	Total/NA	Solid	5035	
MB 880-48643/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-48643/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-48643/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4249-A-1-G MS	Matrix Spike	Total/NA	Solid	5035	
890-4249-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 48722

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4228-1	FS33A	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 48081

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4228-1	FS33A	Total/NA	Solid	8015B NM	48107
MB 880-48107/1-A	Method Blank	Total/NA	Solid	8015B NM	48107
LCS 880-48107/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	48107
LCSD 880-48107/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	48107
890-4231-A-16-C MS	Matrix Spike	Total/NA	Solid	8015B NM	48107
890-4231-A-16-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	48107

Prep Batch: 48107

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4228-1	FS33A	Total/NA	Solid	8015NM Prep	
MB 880-48107/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-48107/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-48107/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4231-A-16-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-4231-A-16-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 48212

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4228-1	FS33A	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: Pickett Draw Federal #001

Job ID: 890-4228-1
SDG: 03E1558127

HPLC/IC

Leach Batch: 47840

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4228-1	FS33A	Soluble	Solid	DI Leach	
MB 880-47840/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-47840/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-47840/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4223-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-4223-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 47996

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4228-1	FS33A	Soluble	Solid	300.0	47840
MB 880-47840/1-A	Method Blank	Soluble	Solid	300.0	47840
LCS 880-47840/2-A	Lab Control Sample	Soluble	Solid	300.0	47840
LCSD 880-47840/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	47840
890-4223-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	47840
890-4223-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	47840

Lab Chronicle

Client: Ensolum
Project/Site: Pickett Draw Federal #001

Job ID: 890-4228-1
SDG: 03E1558127

Client Sample ID: FS33A

Date Collected: 03/02/23 09:30
Date Received: 03/02/23 14:03

Lab Sample ID: 890-4228-1

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			5.01 g	5 mL	48643	03/15/23 09:14	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	48640	03/16/23 06:50	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			48722	03/16/23 09:31	AJ	EET MID
Total/NA	Analysis	8015 NM		1			48212	03/09/23 11:59	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	48107	03/08/23 10:30	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	48081	03/09/23 05:52	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	47840	03/05/23 14:43	CH	EET MID
Soluble	Analysis	300.0		1			47996	03/06/23 22:04	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Pickett Draw Federal #001

Job ID: 890-4228-1
SDG: 03E1558127

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	T104704400-22-25	06-30-23

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: Ensolum
Project/Site: Pickett Draw Federal #001

Job ID: 890-4228-1
SDG: 03E1558127

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: Ensolum
Project/Site: Pickett Draw Federal #001

Job ID: 890-4228-1
SDG: 03E1558127

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4228-1	FS33A	Solid	03/02/23 09:30	03/02/23 14:03	3.5'

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Chain of Custody

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: _____

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Project Manager:	Tacoma Morrissey	Bill to: (if different)	Garret Green
Company Name:	Ensolum	Company Name:	XTO Energy
Address:	3122 National Parks Hwy	Address:	3104 E. Green St.
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	303-887-2946	Email:	Garret.Green@ExxonMobil.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:	Pickett Draw Federal #001	**Turn Around**	
Project Number:	03E1558127	☑ Routine ☐ Rush	Pres. Code
Project Location:	32.150097, -103.991664	Due Date:	
Sampler's Name:	Kase Parker	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	IWM007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	2.4
Total Containers:		Corrected Temperature:	2.2

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)
FS33A	S	3/2/2023	9:30	3.5'	Comp	1	x	x	x

890-4228 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 Comments

Incident ID:
NAB1919955454
Cost Center:
1081581001
AFE:
PA.2021.03254.EXP.01

tmorrissey@ensolum.com

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		3-2-23 1403	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Eurofins Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Phone 575-988-3199 Fax: 575-988-3199

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler:	Lab PM. Kramer, Jessica	Carrier Tracking No(s)	COC No. 890-1157 1
Client Contact: Shipping/Receiving	Phone.	E-Mail Jessica Kramer@et.eurofinsus.com	State of Origin New Mexico	Page: Page 1 of 1
Company: Eurofins Environment Testing South Centr		Accreditations Required (See note): NELAP - Texas		Job #: 890-4228-1
Address: 1211 W Florida Ave ,	Due Date Requested: 3/8/2023			
City: Midland	TAT Requested (days).			
State Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email:	WO #:			
Project Name: Pickett Draw Federal #001	Project #. 89000093			
Site.	SSOW#:			

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, Y Trizma, Z other (specify)

Other:

Analysis Requested

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)	8015MOD_NM/8015NM_S_Prep (MOD) Full TPH	8015MOD_Calc	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc (MOD) BTEX	Total_BTEX_GCV	Total Number of containers	Special Instructions/Note.
			Preservation Code:										
FS33A (890-4228-1)	3/2/23	09 30 Mountain		Solid			X	X	X	X	X	1	

Note. Since laboratory accreditations are subject to change, Eurofins Environment Testing South Central LLC places the ownership of method, analyte & accreditation compliance upon our 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 Environment Testing South Central LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing South Central LLC attention immediately If all requested accreditations are current to date return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing South Central, LLC

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *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.	Company	Received by:	Date/Time	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		

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4228-1
SDG Number: 03E1558127

Login Number: 4228
List Number: 1
Creator: Stutzman, Amanda

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: Ensolum

Job Number: 890-4228-1
SDG Number: 03E1558127

Login Number: 4228
List Number: 2
Creator: Teel, Brianna

List Source: Eurofins Midland
List Creation: 03/03/23 01:06 PM

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	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Ben Belill
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 8/28/2023 9:54:26 PM

JOB DESCRIPTION

Pickett Draw Federal #001
SDG NUMBER 03E1558110

JOB NUMBER

890-5149-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

my EOL

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
8/28/2023 9:54:26 PM

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

Table of Contents

Definitions/Glossary

Client: Ensolum
Job ID: 890-5149-1
Project/Site: Pickett Draw Federal #001
SDG: 03E1558110

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
S1+	Surrogate recovery exceeds control limits, high 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: Ensolum
Project/Site: Pickett Draw Federal #001

Job ID: 890-5149-1
SDG: 03E1558110

Job ID: 890-5149-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-5149-1

Receipt
The samples were received on 8/23/2023 3:15 PM. 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 5.0°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: FS34 (890-5149-1), FS35 (890-5149-2) and FS36 (890-5149-3).

GC VOA
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 surrogate recovery for the blank associated with preparation batch 880-61032 and analytical batch 880-61173 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (890-5148-A-1-B), (890-5148-A-1-C MS) and (890-5148-A-1-D MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: FS34 (890-5149-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-61149 and analytical batch 880-61173 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: FS35 (890-5149-2), FS36 (890-5149-3), (890-5149-A-2-E MS) and (890-5149-A-2-F MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (CCV 880-61173/20), (CCV 880-61173/31), (CCV 880-61173/47) and (CCV 880-61173/5). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-61149 and analytical batch 880-61173 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

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: Ensolum
Project/Site: Pickett Draw Federal #001

Job ID: 890-5149-1
SDG: 03E1558110

Client Sample ID: FS34

Lab Sample ID: 890-5149-1
Matrix: Solid

Date Collected: 08/23/23 10:20
Date Received: 08/23/23 15:15
Sample Depth: 5

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/25/23 08:30	08/25/23 15:46	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/25/23 08:30	08/25/23 15:46	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/25/23 08:30	08/25/23 15:46	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/25/23 08:30	08/25/23 15:46	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/25/23 08:30	08/25/23 15:46	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/25/23 08:30	08/25/23 15:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*	*08/25/23 08:30*	*08/25/23 15:46*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*08/25/23 08:30*	*08/25/23 15:46*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/Kg			08/28/23 09:05	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.5	U	49.5	mg/Kg			08/28/23 22:16	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.5	U	49.5	mg/Kg		08/24/23 16:39	08/26/23 20:25	1
Diesel Range Organics (Over C10-C28)	<49.5	U	49.5	mg/Kg		08/24/23 16:39	08/26/23 20:25	1
OII Range Organics (Over C28-C36)	<49.5	U	49.5	mg/Kg		08/24/23 16:39	08/26/23 20:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*151*	*S1+*	*70 - 130*	*08/24/23 16:39*	*08/26/23 20:25*	*1*
o-Terphenyl	*121*		*70 - 130*	*08/24/23 16:39*	*08/26/23 20:25*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**64.6**		4.98	mg/Kg			08/25/23 12:43	1

Client Sample ID: FS35

Lab Sample ID: 890-5149-2
Matrix: Solid

Date Collected: 08/23/23 10:25
Date Received: 08/23/23 15:15
Sample Depth: 5

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/25/23 08:30	08/25/23 16:30	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/25/23 08:30	08/25/23 16:30	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/25/23 08:30	08/25/23 16:30	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		08/25/23 08:30	08/25/23 16:30	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/25/23 08:30	08/25/23 16:30	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		08/25/23 08:30	08/25/23 16:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*	*08/25/23 08:30*	*08/25/23 16:30*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Pickett Draw Federal #001

Job ID: 890-5149-1
SDG: 03E1558110

Client Sample ID: FS35

Lab Sample ID: 890-5149-2
Matrix: Solid

Date Collected: 08/23/23 10:25
Date Received: 08/23/23 15:15
Sample Depth: 5

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	89		70 - 130	08/25/23 08:30	08/25/23 16:30	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			08/28/23 09:05	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.4	U	50.4	mg/Kg			08/28/23 22:16	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.4	U	50.4	mg/Kg		08/25/23 13:43	08/26/23 22:13	1
Diesel Range Organics (Over C10-C28)	<50.4	U F1	50.4	mg/Kg		08/25/23 13:43	08/26/23 22:13	1
Oil Range Organics (Over C28-C36)	<50.4	U	50.4	mg/Kg		08/25/23 13:43	08/26/23 22:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	168	S1+	70 - 130	08/25/23 13:43	08/26/23 22:13	1
o-Terphenyl	133	S1+	70 - 130	08/25/23 13:43	08/26/23 22:13	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**77.0**		4.96	mg/Kg			08/25/23 13:00	1

Client Sample ID: FS36

Lab Sample ID: 890-5149-3
Matrix: Solid

Date Collected: 08/23/23 10:30
Date Received: 08/23/23 15:15
Sample Depth: 5

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		08/25/23 08:30	08/25/23 16:50	1
Toluene	<0.00201	U	0.00201	mg/Kg		08/25/23 08:30	08/25/23 16:50	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		08/25/23 08:30	08/25/23 16:50	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		08/25/23 08:30	08/25/23 16:50	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		08/25/23 08:30	08/25/23 16:50	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		08/25/23 08:30	08/25/23 16:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		70 - 130	08/25/23 08:30	08/25/23 16:50	1
1,4-Difluorobenzene (Surr)	89		70 - 130	08/25/23 08:30	08/25/23 16:50	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			08/28/23 09:05	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			08/28/23 22:16	1

Client Sample Results

Client: Ensolum
Project/Site: Pickett Draw Federal #001

Job ID: 890-5149-1
SDG: 03E1558110

Client Sample ID: FS36

Lab Sample ID: 890-5149-3

Date Collected: 08/23/23 10:30
Matrix: Solid
Date Received: 08/23/23 15:15
Sample Depth: 5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		08/25/23 13:43	08/26/23 23:19	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		08/25/23 13:43	08/26/23 23:19	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		08/25/23 13:43	08/26/23 23:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*149*	*S1+*	*70 - 130*	*08/25/23 13:43*	*08/26/23 23:19*	*1*
o-Terphenyl	*120*		*70 - 130*	*08/25/23 13:43*	*08/26/23 23:19*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**79.2**		5.02		mg/Kg			08/25/23 13:05	1

Surrogate Summary

Client: Ensolum
Project/Site: Pickett Draw Federal #001

Job ID: 890-5149-1
SDG: 03E1558110

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-32511-A-11-C MS	Matrix Spike	101	92
880-32511-A-11-D MSD	Matrix Spike Duplicate	89	86
890-5149-1	FS34	93	90
890-5149-2	FS35	98	89
890-5149-3	FS36	88	89
LCS 880-61052/1-A	Lab Control Sample	99	99
LCSD 880-61052/2-A	Lab Control Sample Dup	94	86
MB 880-61052/5-A	Method Blank	100	118

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)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-5148-A-1-C MS	Matrix Spike	157 S1+	113
890-5148-A-1-D MSD	Matrix Spike Duplicate	153 S1+	113
890-5149-1	FS34	151 S1+	121
890-5149-2	FS35	168 S1+	133 S1+
890-5149-2 MS	FS35	159 S1+	124
890-5149-2 MSD	FS35	166 S1+	119
890-5149-3	FS36	149 S1+	120
LCS 880-61032/2-A	Lab Control Sample	119	107
LCS 880-61149/2-A	Lab Control Sample	112	101
LCSD 880-61032/3-A	Lab Control Sample Dup	122	111
LCSD 880-61149/3-A	Lab Control Sample Dup	125	104
MB 880-61032/1-A	Method Blank	240 S1+	189 S1+
MB 880-61149/1-A	Method Blank	222 S1+	181 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Pickett Draw Federal #001

Job ID: 890-5149-1
SDG: 03E1558110

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-61052/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 61059 — **Prep Batch: 61052**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		08/25/23 08:30	08/25/23 14:36	1
Toluene	<0.00200	U	0.00200	mg/Kg		08/25/23 08:30	08/25/23 14:36	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		08/25/23 08:30	08/25/23 14:36	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		08/25/23 08:30	08/25/23 14:36	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		08/25/23 08:30	08/25/23 14:36	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		08/25/23 08:30	08/25/23 14:36	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*08/25/23 08:30*	*08/25/23 14:36*	*1*
1,4-Difluorobenzene (Surr)	*118*		*70 - 130*	*08/25/23 08:30*	*08/25/23 14:36*	*1*

Lab Sample ID: LCS 880-61052/1-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 61059 — **Prep Batch: 61052**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1104		mg/Kg		110	70 - 130
Toluene	0.100	0.1085		mg/Kg		109	70 - 130
Ethylbenzene	0.100	0.1096		mg/Kg		110	70 - 130
m-Xylene & p-Xylene	0.200	0.2309		mg/Kg		115	70 - 130
o-Xylene	0.100	0.1073		mg/Kg		107	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: LCSD 880-61052/2-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 61059 — **Prep Batch: 61052**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.09773		mg/Kg		98	70 - 130	12	35
Toluene	0.100	0.1002		mg/Kg		100	70 - 130	8	35
Ethylbenzene	0.100	0.09256		mg/Kg		93	70 - 130	17	35
m-Xylene & p-Xylene	0.200	0.1896		mg/Kg		95	70 - 130	20	35
o-Xylene	0.100	0.09422		mg/Kg		94	70 - 130	13	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*

Lab Sample ID: 880-32511-A-11-C MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 61059 — **Prep Batch: 61052**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00201	U	0.101	0.1039		mg/Kg		103	70 - 130
Toluene	<0.00201	U	0.101	0.1017		mg/Kg		101	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Pickett Draw Federal #001

Job ID: 890-5149-1
SDG: 03E1558110

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

Lab Sample ID: 880-32511-A-11-C MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 61059 — **Prep Batch: 61052**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00201	U	0.101	0.1077		mg/Kg		107	70 - 130
m-Xylene & p-Xylene	<0.00402	U	0.202	0.2364		mg/Kg		117	70 - 130
o-Xylene	<0.00201	U	0.101	0.1085		mg/Kg		108	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*

Lab Sample ID: 880-32511-A-11-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 61059 — **Prep Batch: 61052**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U	0.0992	0.1089		mg/Kg		110	70 - 130	5	35
Toluene	<0.00201	U	0.0992	0.1034		mg/Kg		104	70 - 130	2	35
Ethylbenzene	<0.00201	U	0.0992	0.09961		mg/Kg		100	70 - 130	8	35
m-Xylene & p-Xylene	<0.00402	U	0.198	0.1959		mg/Kg		99	70 - 130	19	35
o-Xylene	<0.00201	U	0.0992	0.09030		mg/Kg		91	70 - 130	18	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*

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

Lab Sample ID: MB 880-61032/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 61173 — **Prep Batch: 61032**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		08/24/23 16:39	08/26/23 10:00	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		08/24/23 16:39	08/26/23 10:00	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/24/23 16:39	08/26/23 10:00	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*240*	*S1+*	*70 - 130*	*08/24/23 16:39*	*08/26/23 10:00*	*1*
o-Terphenyl	*189*	*S1+*	*70 - 130*	*08/24/23 16:39*	*08/26/23 10:00*	*1*

Lab Sample ID: LCS 880-61032/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 61173 — **Prep Batch: 61032**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1085		mg/Kg		108	70 - 130
Diesel Range Organics (Over C10-C28)	1000	880.5		mg/Kg		88	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Pickett Draw Federal #001

Job ID: 890-5149-1
SDG: 03E1558110

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

Lab Sample ID: LCS 880-61032/2-A
Matrix: Solid
Analysis Batch: 61173

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 61032

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	119		70 - 130
o-Terphenyl	107		70 - 130

Lab Sample ID: LCSD 880-61032/3-A
Matrix: Solid
Analysis Batch: 61173

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 61032

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1101		mg/Kg		110	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	912.3		mg/Kg		91	70 - 130	4	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	122		70 - 130
o-Terphenyl	111		70 - 130

Lab Sample ID: 890-5148-A-1-C MS
Matrix: Solid
Analysis Batch: 61173

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 61032

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	990	1028		mg/Kg		101	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.8	U	990	1249		mg/Kg		126	70 - 130		

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	157	S1+	70 - 130
o-Terphenyl	113		70 - 130

Lab Sample ID: 890-5148-A-1-D MSD
Matrix: Solid
Analysis Batch: 61173

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 61032

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	<49.8	U	990	993.7		mg/Kg		97	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	<49.8	U	990	1204		mg/Kg		122	70 - 130	4	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	153	S1+	70 - 130
o-Terphenyl	113		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: Pickett Draw Federal #001

Job ID: 890-5149-1
SDG: 03E1558110

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

Lab Sample ID: MB 880-61149/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 61173 — **Prep Batch: 61149**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		08/25/23 13:43	08/26/23 21:08	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		08/25/23 13:43	08/26/23 21:08	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		08/25/23 13:43	08/26/23 21:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*222*	*S1+*	*70 - 130*	*08/25/23 13:43*	*08/26/23 21:08*	*1*
o-Terphenyl	*181*	*S1+*	*70 - 130*	*08/25/23 13:43*	*08/26/23 21:08*	*1*

Lab Sample ID: LCS 880-61149/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 61173 — **Prep Batch: 61149**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1049		mg/Kg		105	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	830.8		mg/Kg		83	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*112*		*70 - 130*
o-Terphenyl	*101*		*70 - 130*

Lab Sample ID: LCSD 880-61149/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 61173 — **Prep Batch: 61149**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1124		mg/Kg		112	70 - 130	7	20
Diesel Range Organics (Over C10-C28)			1000	903.0		mg/Kg		90	70 - 130	8	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*125*		*70 - 130*
o-Terphenyl	*104*		*70 - 130*

Lab Sample ID: 890-5149-2 MS — **Client Sample ID: FS35**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 61173 — **Prep Batch: 61149**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.4	U	1000	1058		mg/Kg		102	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.4	U F1	1000	1325	F1	mg/Kg		133	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Pickett Draw Federal #001

Job ID: 890-5149-1
SDG: 03E1558110

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

Lab Sample ID: 890-5149-2 MS
Matrix: Solid
Analysis Batch: 61173

Client Sample ID: FS35
Prep Type: Total/NA
Prep Batch: 61149

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	159	S1+	70 - 130
o-Terphenyl	124		70 - 130

Lab Sample ID: 890-5149-2 MSD
Matrix: Solid
Analysis Batch: 61173

Client Sample ID: FS35
Prep Type: Total/NA
Prep Batch: 61149

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	<50.4	U	1000	1081		mg/Kg		104	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	<50.4	U F1	1000	1340	F1	mg/Kg		134	70 - 130	1	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	166	S1+	70 - 130
o-Terphenyl	119		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-61108/1-A
Matrix: Solid
Analysis Batch: 61121

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			08/25/23 11:06	1

Lab Sample ID: LCS 880-61108/2-A
Matrix: Solid
Analysis Batch: 61121

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	243.4		mg/Kg		97	90 - 110		

Lab Sample ID: LCSD 880-61108/3-A
Matrix: Solid
Analysis Batch: 61121

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	248.4		mg/Kg		99	90 - 110	2	20

Lab Sample ID: 890-5149-1 MS
Matrix: Solid
Analysis Batch: 61121

Client Sample ID: FS34
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	64.6		249	318.3		mg/Kg		102	90 - 110		

QC Sample Results

Client: Ensolum
Project/Site: Pickett Draw Federal #001

Job ID: 890-5149-1
SDG: 03E1558110

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-5149-1 MSD
Matrix: Solid
Analysis Batch: 61121

Client Sample ID: FS34
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	64.6		249	325.0		mg/Kg		105	90 - 110	2	20

QC Association Summary

Client: Ensolum
Project/Site: Pickett Draw Federal #001

Job ID: 890-5149-1
SDG: 03E1558110

GC VOA

Prep Batch: 61052

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5149-1	FS34	Total/NA	Solid	5035	
890-5149-2	FS35	Total/NA	Solid	5035	
890-5149-3	FS36	Total/NA	Solid	5035	
MB 880-61052/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-61052/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-61052/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-32511-A-11-C MS	Matrix Spike	Total/NA	Solid	5035	
880-32511-A-11-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 61059

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5149-1	FS34	Total/NA	Solid	8021B	61052
890-5149-2	FS35	Total/NA	Solid	8021B	61052
890-5149-3	FS36	Total/NA	Solid	8021B	61052
MB 880-61052/5-A	Method Blank	Total/NA	Solid	8021B	61052
LCS 880-61052/1-A	Lab Control Sample	Total/NA	Solid	8021B	61052
LCSD 880-61052/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	61052
880-32511-A-11-C MS	Matrix Spike	Total/NA	Solid	8021B	61052
880-32511-A-11-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	61052

Analysis Batch: 61250

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5149-1	FS34	Total/NA	Solid	Total BTEX	
890-5149-2	FS35	Total/NA	Solid	Total BTEX	
890-5149-3	FS36	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 61032

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5149-1	FS34	Total/NA	Solid	8015NM Prep	
MB 880-61032/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-61032/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-61032/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-5148-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-5148-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Prep Batch: 61149

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5149-2	FS35	Total/NA	Solid	8015NM Prep	
890-5149-3	FS36	Total/NA	Solid	8015NM Prep	
MB 880-61149/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-61149/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-61149/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-5149-2 MS	FS35	Total/NA	Solid	8015NM Prep	
890-5149-2 MSD	FS35	Total/NA	Solid	8015NM Prep	

Analysis Batch: 61173

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5149-1	FS34	Total/NA	Solid	8015B NM	61032
890-5149-2	FS35	Total/NA	Solid	8015B NM	61149

QC Association Summary

Client: Ensolum
Project/Site: Pickett Draw Federal #001

Job ID: 890-5149-1
SDG: 03E1558110

GC Semi VOA (Continued)

Analysis Batch: 61173 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5149-3	FS36	Total/NA	Solid	8015B NM	61149
MB 880-61032/1-A	Method Blank	Total/NA	Solid	8015B NM	61032
MB 880-61149/1-A	Method Blank	Total/NA	Solid	8015B NM	61149
LCS 880-61032/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	61032
LCS 880-61149/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	61149
LCSD 880-61032/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	61032
LCSD 880-61149/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	61149
890-5148-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	61032
890-5148-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	61032
890-5149-2 MS	FS35	Total/NA	Solid	8015B NM	61149
890-5149-2 MSD	FS35	Total/NA	Solid	8015B NM	61149

Analysis Batch: 61398

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5149-1	FS34	Total/NA	Solid	8015 NM	
890-5149-2	FS35	Total/NA	Solid	8015 NM	
890-5149-3	FS36	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 61108

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5149-1	FS34	Soluble	Solid	DI Leach	
890-5149-2	FS35	Soluble	Solid	DI Leach	
890-5149-3	FS36	Soluble	Solid	DI Leach	
MB 880-61108/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-61108/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-61108/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-5149-1 MS	FS34	Soluble	Solid	DI Leach	
890-5149-1 MSD	FS34	Soluble	Solid	DI Leach	

Analysis Batch: 61121

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5149-1	FS34	Soluble	Solid	300.0	61108
890-5149-2	FS35	Soluble	Solid	300.0	61108
890-5149-3	FS36	Soluble	Solid	300.0	61108
MB 880-61108/1-A	Method Blank	Soluble	Solid	300.0	61108
LCS 880-61108/2-A	Lab Control Sample	Soluble	Solid	300.0	61108
LCSD 880-61108/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	61108
890-5149-1 MS	FS34	Soluble	Solid	300.0	61108
890-5149-1 MSD	FS34	Soluble	Solid	300.0	61108

Lab Chronicle

Client: Ensolum
Project/Site: Pickett Draw Federal #001

Job ID: 890-5149-1
SDG: 03E1558110

Client Sample ID: FS34

Lab Sample ID: 890-5149-1
Date Collected: 08/23/23 10:20
Matrix: Solid
Date Received: 08/23/23 15:15

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	61052	08/25/23 08:30	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	61059	08/25/23 15:46	SM	EET MID
Total/NA	Analysis	Total BTEX		1			61250	08/28/23 09:05	SM	EET MID
Total/NA	Analysis	8015 NM		1			61398	08/28/23 22:16	SM	EET MID
Total/NA	Prep	8015NM Prep			10.10 g	10 mL	61032	08/24/23 16:39	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	61173	08/26/23 20:25	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	61108	08/25/23 10:58	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	61121	08/25/23 12:43	CH	EET MID

Client Sample ID: FS35

Lab Sample ID: 890-5149-2
Date Collected: 08/23/23 10:25
Matrix: Solid
Date Received: 08/23/23 15:15

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	61052	08/25/23 08:30	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	61059	08/25/23 16:30	SM	EET MID
Total/NA	Analysis	Total BTEX		1			61250	08/28/23 09:05	SM	EET MID
Total/NA	Analysis	8015 NM		1			61398	08/28/23 22:16	SM	EET MID
Total/NA	Prep	8015NM Prep			9.92 g	10 mL	61149	08/25/23 13:43	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	61173	08/26/23 22:13	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	61108	08/25/23 10:58	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	61121	08/25/23 13:00	CH	EET MID

Client Sample ID: FS36

Lab Sample ID: 890-5149-3
Date Collected: 08/23/23 10:30
Matrix: Solid
Date Received: 08/23/23 15:15

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	61052	08/25/23 08:30	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	61059	08/25/23 16:50	SM	EET MID
Total/NA	Analysis	Total BTEX		1			61250	08/28/23 09:05	SM	EET MID
Total/NA	Analysis	8015 NM		1			61398	08/28/23 22:16	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	61149	08/25/23 13:43	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	61173	08/26/23 23:19	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	61108	08/25/23 10:58	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	61121	08/25/23 13:05	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Pickett Draw Federal #001

Job ID: 890-5149-1
SDG: 03E1558110

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: Ensolum
Project/Site: Pickett Draw Federal #001

Job ID: 890-5149-1
SDG: 03E1558110

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: Ensolum
Project/Site: Pickett Draw Federal #001

Job ID: 890-5149-1
SDG: 03E1558110

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-5149-1	FS34	Solid	08/23/23 10:20	08/23/23 15:15	5
890-5149-2	FS35	Solid	08/23/23 10:25	08/23/23 15:15	5
890-5149-3	FS36	Solid	08/23/23 10:30	08/23/23 15:15	5

eurofins | Environment Testing Xenco

Chain of Custody

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: _____

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Project Manager:	Ben Belill	Bill to: (if different)	Garrett Green
Company Name:	Ensolum	Company Name:	XTO Energy
Address:	3122 National Parks Hwy	Address:	3104 E. Green St.
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	303-887-2946	Email:	Garrett.Green@ExxonMobil.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:	Pickett Draw Federal #001	Turn Around	
Project Number:	03E1558110	☑ Routine	☒ Rush
Project Location:		Due Date:	24H
Sampler's Name:	Connor Whitman	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	TWM007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	5.2
Total Containers:		Corrected Temperature:	5.0

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	CHLORIDES (EPA: 3000.0)	TPH (8015)	BTEX (8021)
FS34	S	8/23/23	1020	5'	C	1	/	/	/
FS35	|	|	1025	5'	C	1	/	/	/
FS36	|	|	1030	5'	C	1	/	/	/

Parameters

890-5149 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 Comments

Incident ID: NAB1919955454

Cost Center: 1936651001

AFE: PA.2021.03254.EXP.01

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		8.23.23 15:15			
3			4		
5			6		

Revised Date: 08/25/2020 Rev 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5149-1
SDG Number: 03E1558110

Login Number: 5149
List Number: 1
Creator: Clifton, Cloe

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.	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	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5149-1
SDG Number: 03E1558110

Login Number: 5149
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 08/25/23 10:44 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	

ENSOLUM

APPENDIX D

NMOCD Notifications

Tacoma Morrissey

From: Green, Garrett J <garrett.green@exxonmobil.com>
Sent: Thursday, December 8, 2022 10:38 AM
To: ocd.enviro@emnrd.nm.gov; Bratcher, Michael, EMNRD; Harimon, Jocelyn, EMNRD; Hamlet, Robert, EMNRD
Cc: DelawareSpills /SM; Tacoma Morrissey
Subject: XTO - Sampling Notification (Week of 12/12/22 - 12/16/22)

[**EXTERNAL EMAIL**]

All,

XTO plans to complete final sampling activities at the following sites the week of Dec 12, 2022.

- PLU 27 BD 161H / nAPP2217546910, nAPP2218236445, nAPP2218943007
- PLU 18 TWR Sat Battery/ nAPP2230551957
- Pickett Draw Federal #001/ NAB1919955454

Thank you,

Garrett Green
Environmental Coordinator
Delaware Business Unit
(575) 200-0729
Garrett.Green@ExxonMobil.com

XTO Energy, Inc.
3104 E. Greene Street | Carlsbad, NM 88220 | M: (575)200-0729

From: Collins, Melanie
To: ocd.enviro (ocd.enviro@emnrd.nm.gov); Bratcher, Michael, EMNRD (mike.bratcher@emnrd.nm.gov); Hamlet, Robert, EMNRD (Robert.Hamlet@emnrd.nm.gov); Harimon, Jocelyn, EMNRD (Jocelyn.Harimon@emnrd.nm.gov)
Cc: Tacoma Morrissey; Green, Garrett J
Subject: XTO - Sampling Notification (Week of 2/27/23 - 3/3/23)
Date: Thursday, February 23, 2023 11:39:15 AM
Attachments: image001.png

[**EXTERNAL EMAIL**]

All,

XTO plans to complete final sampling activities at the following sites the week of Feb 27, 2023.

- Row 2 / NAPP2304148392
- Remuda 25N 704H / nAPP2226341236
- Pickett Draw Federal 1 / NAB1919955454
- ROW 4 Muy Wayno / nAPP2209039217
- Tiger Compressor Station / nAPP2235638568

Thank you,

Melanie Collins

Environmental Technician
melanie.collins@exxonmobil.com
432-556-3756

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 270139

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 270139
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	We have received your Remediation Closure Report for Incident #NAB1919955454 PICKETT DRAW FEDERAL #001, thank you. This Remediation Closure Report is approved. Areas reasonably needed for production or subsequent drilling operations will need to be reclaimed and revegetated as soon as they are no longer reasonably needed. A report for reclamation and revegetation including pictures of the contoured backfilled excavation surface and a thorough discussion on reseeding mixture, vegetation ratio, timelines, etc.., will need to be submitted and approved prior to this incident receiving the final status of "Restoration Complete".	2/15/2024
rhamlet	On future incidents, three separate background borings should be completed. Collect samples in 1-foot increments down to the depth equivalent to the deepest depth of the excavation. The three background numbers at a depth of 1 foot should be averaged. The three background numbers at a depth of 2 feet should be averaged and so on. The composite numbers will be used for the final background numbers. Please contact the OCD if you have any questions on the process.	2/15/2024