

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	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party	OGRID
Contact Name	Contact Telephone
Contact email	Incident # (assigned by OCD)
Contact mailing address	

Location of Release Source

Latitude _____ Longitude _____
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Site Type
Date Release Discovered	API# (if applicable)

Unit Letter	Section	Township	Range	County

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	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

Incident ID	
District RP	
Facility ID	
Application ID	

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

Initial Response

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

☐ The source of the release has been stopped.	
☐ The impacted area has been secured to protect human health and the environment.	
☐ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.	
☐ All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why:	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name: _____	Title: _____
Signature:  _____	Date: 10/9/2018
email: _____	Telephone: _____
<u>OCD Only</u>	
Received by: _____	Date: _____

Incident ID	
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

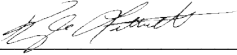
State of New Mexico
Oil Conservation Division

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Incident ID	
District RP	
Facility ID	
Application ID	

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

Printed Name: _____ Title: _____

Signature:  _____ Date: 7/19/2019

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

Incident ID	
District RP	2RP-5007
Facility ID	
Application ID	

Remediation Plan

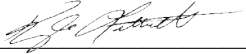
Remediation Plan Checklist: *Each of the following items must be included in the plan.*

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

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

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

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

Printed Name: Kyle Littrell Title: SH&E Supervisor
Signature:  Date: 7/19/2019
email: Kyle_Littrell@xtoenergy.com Telephone: 532-221-7331

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 103
Midland, Texas 79705
432.704.5178

July 19, 2019

Mr. Bradford Billings
New Mexico Oil Conservation Division
1220 South St. Francis Drive, #3
Santa Fe, New Mexico 87505

**RE: Deferral Request
Nash Draw 8 Federal SWD Battery #1
Remediation Permit Number 2RP-5007
Eddy County, New Mexico**

Dear Mr. Billings:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following report detailing soil sampling and excavation activities at the Nash Draw 8 Federal Salt Water Disposal (SWD) Battery #1 (Site) in Unit L, Section 8, Township 24 South, Range 30 East, in Eddy County, New Mexico (Figure 1). The purpose of the soil sampling and excavation activities was to address impacts to soil after a crude oil and produced water release at the Site.

On September 25, 2018, a failed joint on the fiberglass line at the Site caused a release of fluids to the lined containment and onto the well pad. Approximately 4 barrels (bbls) of crude oil and 281 bbls of produced water were released. The release impacted approximately 29,702 square feet on the well pad. A vacuum truck was dispatched to the Site to recover free-standing fluid; approximately 4 bbls of crude oil and 276 bbls of produced water were recovered. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 on October 9, 2018 and was assigned Remediation Permit (RP) number 2RP-5007 (Attachment 1). Based on the excavation activities and results of the soil sampling events, XTO is submitting this deferral request, describing remediation that has occurred and requesting deferral of final remediation.

The release is included in the Compliance Agreement for Remediation for Historical Releases (Compliance Agreement) between XTO and the NMOCD, effective November 13, 2018. The purpose of the Compliance Agreement is to ensure reportable releases that occurred prior to August 14, 2018, where XTO is responsible for the corrective action, comply with Title 19, Chapter 15, Part 29 (19.15.29) of the New Mexico Administrative Code (NMAC) as amended on August 14, 2018. The release is categorized as a Tier IV site in the Compliance Agreement, meaning remediation of the release was initiated prior to August 14, 2018, the effective date of 19.15.29 NMAC.



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BACKGROUND

LTE characterized the Site according to Table 1, *Closure Criteria for Soils Impacted by a Release*, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest water well data. The nearest permitted water well with depth to water data is C 02108, located approximately 465 feet from the source of release on the south edge of the pad. The water well has a depth to groundwater of 186 feet and a total depth of 200 feet bgs. Ground surface elevation at the water well location is 3,200 feet, which is 4 feet lower in elevation than the Site. The closest continuously flowing water or significant watercourse to the Site is a seasonal unnamed dry wash located approximately 990 feet southeast of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is located in a low potential karst area. The Site is located approximately 465 feet from a private domestic fresh water well used by less than five households for domestic or stock watering purposes. Due to the Site being within 500 horizontal feet of groundwater well C 02108 that is used for livestock watering purposes, the following NMOCD Table 1 closure criteria apply: 10 milligrams per kilogram (mg/kg) benzene; 50 mg/kg total benzene, toluene, ethylbenzene, and total xylenes (BTEX); 100 mg/kg total petroleum hydrocarbons (TPH); and 600 mg/kg chloride.

PRELIMINARY SOIL SAMPLING

On October 2, 2018, LTE personnel inspected the Site to evaluate the release extent. Surface staining was observed in the release area on the well pad. The release extent was mapped using a handheld Global Positioning System (GPS) unit and is depicted on Figure 2. LTE personnel collected six preliminary soil samples (SS01 through SS06) within the release area from a depth of 0.5 feet bgs to assess the lateral extent of soil impacts. The soil samples were screened for volatile aromatic hydrocarbons and chlorides using a photo-ionization detector (PID) and Hach® chloride QuanTab® test strips. The soil samples were placed directly into pre-cleaned glass jars, labeled with location, date, time, sampler, and method of analysis, and immediately placed on ice. The samples were shipped to Xenco Laboratories (Xenco) in Midland, Texas, at 4 degrees Celsius (°C) under strict chain-of-custody procedures for analysis of BTEX by United States Environmental Protection Agency (EPA) Method 8021B, TPH-gasoline range organics (GRO), TPH-diesel range organics (DRO), and TPH-oil range organics (ORO) by EPA Method 8015M/D, and chloride by EPA Method 300.0. The soil sample locations are presented on Figure 2.

Laboratory analytical results indicated that chloride concentrations exceeded the NMOCD Table 1 closure criteria in preliminary soil samples SS01 through SS06; and TPH concentrations exceeded the NMOCD Table 1 closure criteria in preliminary soil sample SS06. Laboratory





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analytical results are summarized in Table 1, and the laboratory analytical report is included as Attachment 2. Based on the laboratory analytical results, excavation of impacted soil was warranted.

EXCAVATION ACTIVITIES

During October 2018 and April 2019, LTE personnel returned to the Site to oversee excavation of impacted soil as indicated by laboratory analytical results and visual surface staining. To direct excavation activities, LTE screened soil samples using a PID and Hach® chloride QuanTab® test strips. Due to site operational conditions and heavy vehicular traffic at the Site, impacted soil was excavated in two different areas. When excavation began, XTO elected to apply a composite sampling protocol as indicated in 19.15.29.12.D NMAC, where each sample is not representative of more than 200 square feet. The original 76 samples were collected in this manner, but due to the size of the release area, the quantity of samples required to meet the NMOCD requirement of collecting composite soil samples every 200 square feet was not practical; therefore, LTE applied for a variance on November 27, 2018 to allow for the 200 square feet to be extended to 1,000 square feet per composite sample. The NMOCD approved this variance request on November 30, 2018. Following removal of impacted soil, LTE collected 5-point composite soil samples every 1,000 square feet from the sidewalls and floor of the excavation. The 5-point composite samples were collected by depositing 5 aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing.

Composite soil samples SW01 through SW16 were collected from the sidewalls of the excavations from depths of 0 feet to 2 feet bgs. Composite soil samples FS01 through FS11 and SS07 through SS62 were collected from the floor of the excavations from depths ranging from 0.5 foot to 2 feet bgs. The excavation soil samples were collected, handled, and analyzed as described above and submitted to Xenco in Midland, Texas. The excavation soil sample locations are presented on Figure 3.

Laboratory analytical results indicated that benzene, BTEX, TPH, and chloride concentrations were compliant with the NMOCD Table 1 closure criteria in excavation soil samples SW01 through SW08, SW10 through SW16, FS01 through FS22, SS07 through SS32, and SS34 through SS62 collected from the floor and sidewalls of the excavations. Laboratory analytical results for SW09 and SS33 indicated that chloride concentrations exceeded the NMOCD Table 1 closure criteria.

Further excavation of impacted soil was required in the area of excavation samples SW09 and SS33. Subsequent excavation floor samples FS04 and FS05, collected at depths ranging from 0 to 1.5 feet bgs, were collected in the area of excavation soil samples SW09 and SS33, respectively. Laboratory analytical results indicated that benzene, BTEX, TPH, and chloride concentrations were compliant with the NMOCD Table 1 closure criteria in excavation floor samples FS04 and FS05.





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The southern excavation measured approximately 6,780 square feet in area. The northern excavation measured approximately 20,950 square feet in area. The horizontal extents of the excavations are presented on Figure 3. A total of approximately 1,320 cubic yards of impacted soil were removed from the excavations. The impacted soil was transported and properly disposed of at the Lea Land landfill facility located in Hobbs, New Mexico.

DELINEATION ACTIVITIES

During April and May 2019, LTE personnel returned to the Site to oversee potholing activities to delineate the lateral and vertical extent of impacted soil in areas of the release footprint near active production equipment or in areas that had not been excavated. Three delineation potholes (PH01 through PH03) were advanced via backhoe in and around the release extent. Two delineation soil samples were collected for laboratory analysis from each pothole from depths of 0.5 feet (PH01 through PH03) and 1 foot bgs (PH01A through PH03A).

Laboratory analytical results indicated that chloride concentrations in pothole soil sample PH03 collected at 0.5 feet bgs immediately adjacent to an active pipeline and where truck traffic is high exceeded the NMOCD Table 1 closure criteria. Subsequent delineation potholes PH04 through PH06 were advanced via backhoe to delineate soil left in place in the area of PH03. Two delineation soil samples were collected for laboratory analysis from each pothole from depths of 0.5 feet or 1 foot bgs (PH04 through PH06) and 1 foot or 2 feet bgs (PH04A through PH06A).

Soil was field screened in the potholes using a PID and Hach® chloride QuanTab® test strips. The delineation soil samples were collected, handled, and analyzed as described above and submitted to Xenco in Midland, Texas. The soil sample locations and depths are depicted on Figure 4 and soil sample logs are included as Attachment 3.

ANALYTICAL RESULTS

Laboratory analytical results indicated that TPH and/or chloride concentrations in preliminary soil samples SS01 through SS06 and excavation soil samples SW09 and SS33 exceeded the NMOCD Table 1 closure criteria. Impacted soil was excavated to the extent possible. Laboratory analytical results for subsequent excavation floor samples FS04 and FS05 indicated that benzene, BTEX, TPH, and chloride concentrations were compliant with the NMOCD Table 1 closure criteria. Laboratory analytical results indicated a chloride concentration of 917 mg/kg in pothole soil sample PH03 which exceeds the NMOCD Table 1 closure criteria.

Further excavation of impacted soil beyond pothole soil sample PH03 was limited due to site operational conditions. XTO safety policy restricts soil disturbing activities in areas close to production equipment and where vehicular traffic is too heavy to safely excavate impacted soil. These XTO safety policies are established to protect workers and reduce the likelihood of compromising the foundation of the well pad where vehicles are driving. These policies were





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enforced where impacted soil was identified in heavily traffic areas. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Attachment 2.

DEFERRAL REQUEST

A total of approximately 1,320 cubic yards of impacted soil were excavated from the Site; however, residual impacted soil was left in place for compliance with the XTO safety policy regarding earth moving activities where site operational conditions are deemed too unsafe. Laboratory analytical results for pothole soil sample PH03 indicated that soil with chloride concentrations exceeding the NMOCD Table 1 closure criteria was left in place where vehicular traffic was too heavy to safely excavate impacted soil. Impacted soil was excavated to the extent possible. The impacted soil remaining in place in this area is delineated vertically and laterally by delineation soil samples PH04 through PH06 and PH04A through PH06A; excavation sidewall sample SW06; and excavation floor samples SS37 and SS40. An estimated 130 cubic yards of impacted soil remains in place between 0.5 feet bgs and 2 foot bgs, assuming a maximum 2 foot depth based on delineation soil samples PH04A through PH06A collected from a depth of 2 feet bgs that were compliant with the NMOCD Table 1 closure criteria.

XTO requests to 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. XTO requests deferral of final remediation for RP Number 2RP-5007. An updated NMOCD Form C-141 is included as Attachment 1. A photographic log of the Site is included as Attachment 4.

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

Sincerely,
LT ENVIRONMENTAL, INC.

A handwritten signature in black ink, reading 'Carol Ann Whaley'.

Carol Ann Whaley
Staff Geologist

A handwritten signature in black ink, reading 'Ashley L. Ager'.

Ashley L. Ager, P.G.
Senior Geologist

cc: Kyle Littrell, XTO
Robert Hamlet, NMOCD
Victoria Venegas, NMOCD
Jim Amos, U.S. Bureau of Land Management





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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 Soil Analytical Reports
- Attachment 1 Initial/Final NMOCD Form C-141 (2RP-5007)
- Attachment 2 Laboratory Analytical Reports
- Attachment 3 Soil Sample Logs
- Attachment 4 Photographic Log



FIGURES





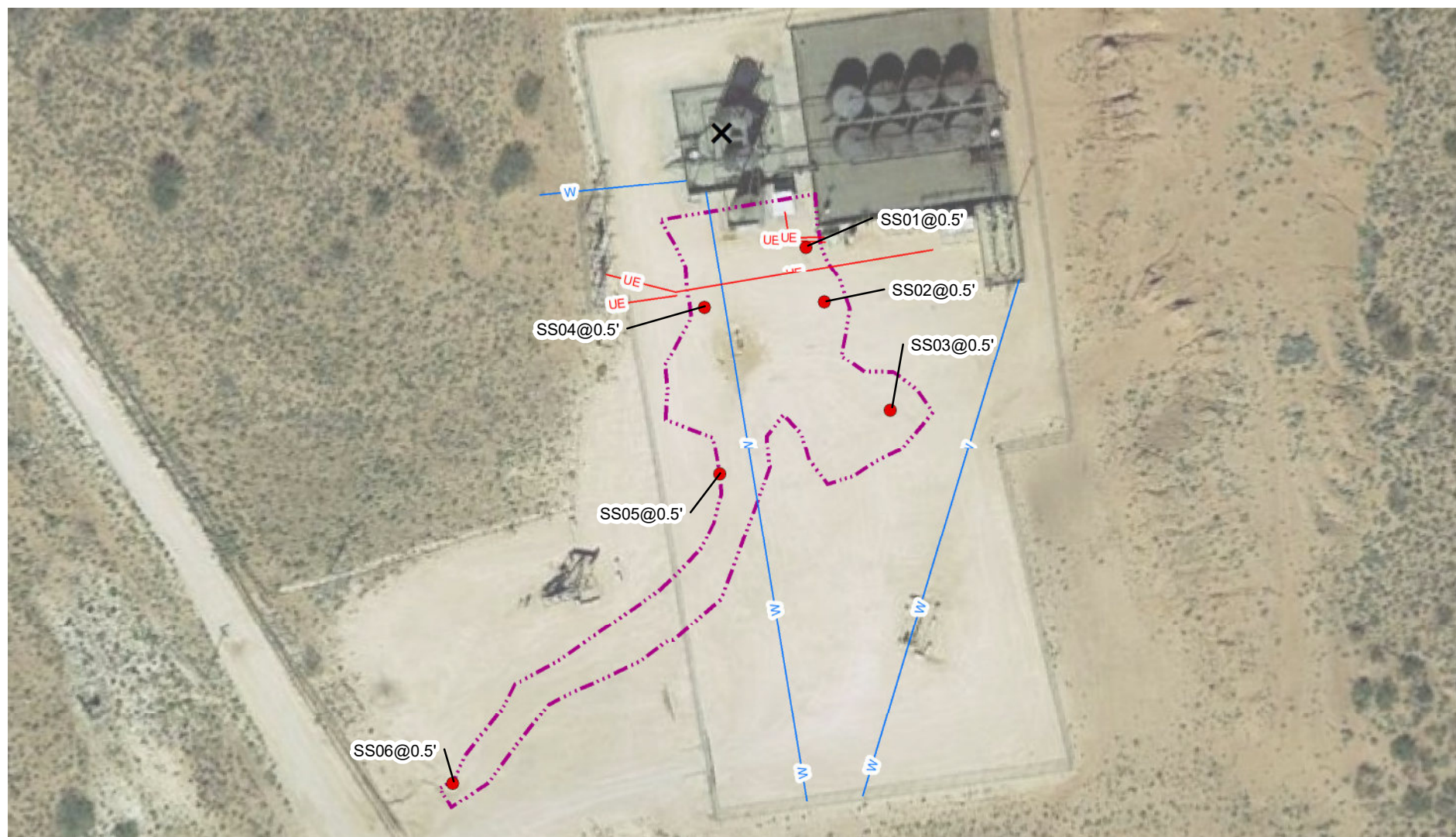


IMAGE COURTESY OF GOOGLE EARTH 2017

LEGEND

- X** RELEASE LOCATION
- PRELIMINARY SOIL SAMPLE WITH CONCENTRATIONS EXCEEDING APPLICABLE STANDARDS
- UE—** ELECTRIC LINE
- W—** WATER LINE
- RELEASE EXTENT

SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)
 NOTE: REMEDIATION PERMIT NUMBER 2RP-5007

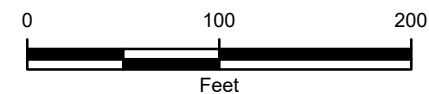


FIGURE 2
 PRELIMINARY SOIL SAMPLE LOCATIONS
 NASH DRAW 8 FEDERAL SWD BATTERY #1
 UNIT L SEC 8 T24S R30E
 EDDY COUNTY, NEW MEXICO
 XTO ENERGY, INC.



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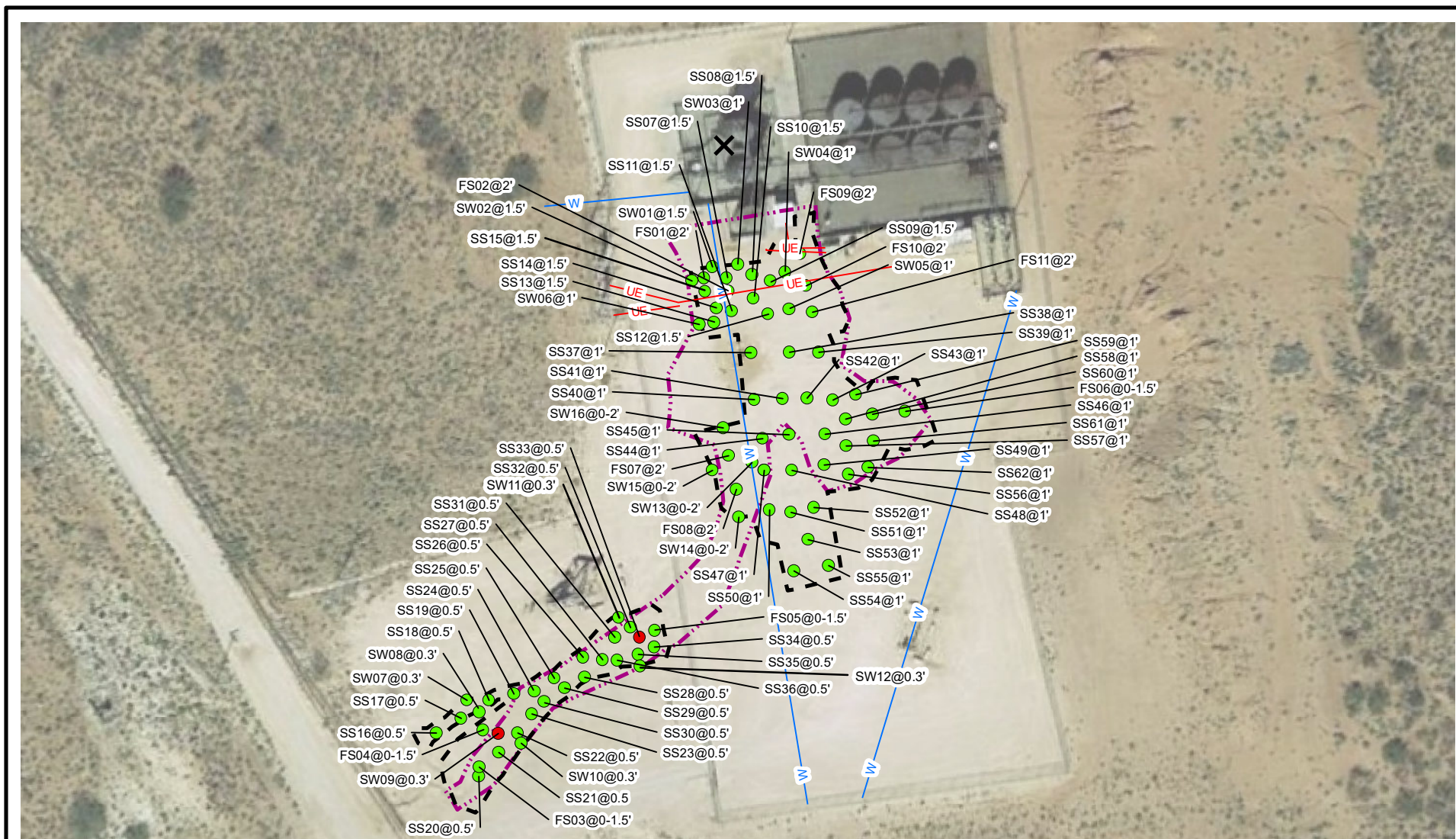


IMAGE COURTESY OF GOOGLE EARTH 2017

LEGEND

- X** RELEASE LOCATION
- EXCAVATION SOIL SAMPLE WITH CONCENTRATIONS EXCEEDING APPLICABLE STANDARDS
- EXCAVATION SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE STANDARDS
- UE—** ELECTRIC LINE
- W—** WATER LINE
- RELEASE EXTENT
- EXCAVATION EXTENT

SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)
 NOTE: REMEDIATION PERMIT NUMBER 2RP-5007

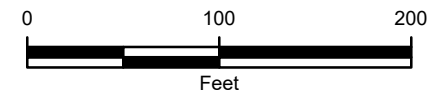


FIGURE 3
EXCAVATION SOIL SAMPLE LOCATIONS
NASH DRAW 8 FEDERAL SWD BATTERY #1
UNIT L SEC 8 T24S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.



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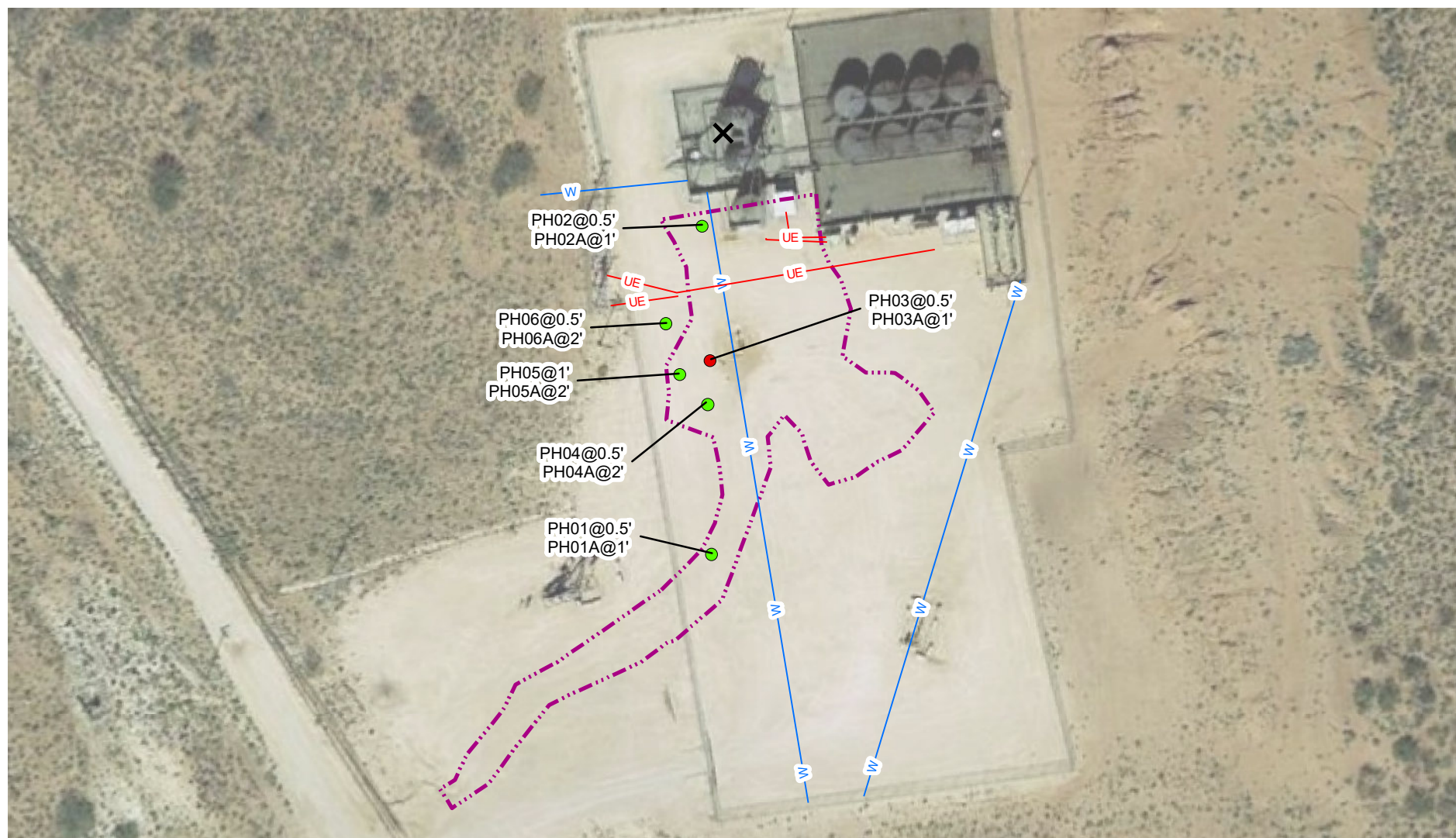


IMAGE COURTESY OF GOOGLE EARTH 2017

LEGEND

- X RELEASE LOCATION
 ● DELINEATION SOIL SAMPLE WITH CONCENTRATIONS EXCEEDING APPLICABLE STANDARDS
 ● DELINEATION SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE STANDARDS
 —UE— ELECTRIC LINE
 —W— WATER LINE
 [MAGENTA DASHED LINE] RELEASE EXTENT

SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)
 NOTE: REMEDIATION PERMIT NUMBER 2RP-5007

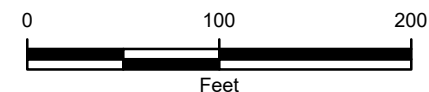


FIGURE 4
 DELINEATION SOIL SAMPLE LOCATIONS
 NASH DRAW 8 FEDERAL SWD BATTERY #1
 UNIT L SEC 8 T24S R30E
 EDDY COUNTY, NEW MEXICO
 XTO ENERGY, INC.



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TABLES



TABLE 1
SOIL ANALYTICAL RESULTS

NASH DRAW 8 FEDERAL SWD BATTERY #1
REMEDIATION PERMIT NUMBER 2RP-5007
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	10/02/2018	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	5,210
SS02	0.5	10/02/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	1,820
SS03	0.5	10/02/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	804
SS04	0.5	10/02/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	2,360
SS05	0.5	10/02/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	1,760
SS06	0.5	10/02/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	1,180	24.2	1,180	1,200	4,730
FS01	2	10/12/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	233
FS02	2	10/12/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	142
SS07	1.5	10/12/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	120
SS08	1.5	10/12/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<14.9	<14.9	<14.9	<14.9	<14.9	247
SS09	1.5	10/12/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<14.9	<14.9	<14.9	<14.9	<14.9	154
SW01	1.5	10/12/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	199
SW02	1.5	10/12/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	22.2
SS10	1.5	10/15/2018	<0.0197	<0.0197	0.0276	0.103	0.131	<15.0	<15.0	<15.0	<15.0	<15.0	292
SS11	1.5	10/15/2018	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<14.9	<14.9	<14.9	<14.9	<14.9	279
SS12	1.5	10/15/2018	<0.0189	<0.0189	<0.0189	<0.0189	<0.0189	<15.0	<15.0	<15.0	<15.0	<15.0	491
SS13	1.5	10/15/2018	<0.0199	<0.0199	<0.0199	<0.0199	<0.0199	<15.0	<15.0	<15.0	<15.0	<15.0	199
SS14	1.5	10/15/2018	<0.0193	<0.0193	<0.0193	<0.0193	<0.0193	<15.0	<15.0	<15.0	<15.0	<15.0	46.1
SS15	1.5	10/15/2018	<0.0170	<0.0170	<0.0170	<0.0170	<0.0170	<15.0	<15.0	<15.0	<15.0	<15.0	255
SW03	1	10/15/2018	<0.0190	<0.0190	<0.0190	<0.0190	<0.0190	<15.0	<15.0	<15.0	<15.0	<15.0	157
SW04	1	10/15/2018	<0.0193	<0.0193	<0.0193	<0.0193	<0.0193	<15.0	<15.0	<15.0	<15.0	<15.0	329
SW05	1	10/15/2018	<0.0177	<0.0177	<0.0177	<0.0177	<0.0177	<15.0	<15.0	<15.0	<15.0	<15.0	97.4
SW06	1	10/15/2018	<0.0195	<0.0195	<0.0195	<0.0195	<0.0195	<14.9	<14.9	<14.9	<14.9	<14.9	165
SS16	0.5	10/16/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	65.5
SS17	0.5	10/16/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	112
SS18	0.5	10/16/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	281



TABLE 1
SOIL ANALYTICAL RESULTS

NASH DRAW 8 FEDERAL SWD BATTERY #1
REMEDICATION PERMIT NUMBER 2RP-5007
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)
SS19	0.5	10/16/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	364
SS20	0.5	10/16/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<14.9	<14.9	<14.9	<14.9	<14.9	214
SS21	0.5	10/16/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	271
SS22	0.5	10/16/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	223
SS23	0.5	10/16/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	236
SW07	0.3	10/16/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	202
SW08	0.3	10/16/2018	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	157
SW09	0.3	10/16/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	614
SW10	0.3	10/16/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	194
SS24	0.5	10/18/2018	<0.0189	<0.0189	<0.0189	<0.0189	<0.0189	<15.0	<15.0	<15.0	<15.0	<15.0	92.1
SS25	0.5	10/18/2018	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<15.0	<15.0	<15.0	<15.0	<15.0	290
SS26	0.5	10/18/2018	<0.0179	<0.0179	<0.0179	<0.0179	<0.0179	<14.9	<14.9	<14.9	<14.9	<14.9	174
SS27	0.5	10/18/2018	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<15.0	<15.0	<15.0	<15.0	<15.0	283
SS28	0.5	10/18/2018	<0.0183	<0.0183	<0.0183	<0.0183	<0.0183	<15.0	<15.0	<15.0	<15.0	<15.0	155
SS29	0.5	10/18/2018	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<15.0	<15.0	<15.0	<15.0	<15.0	269
SS30	0.5	10/18/2018	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<15.0	<15.0	<15.0	<15.0	<15.0	91.0
SS31	0.5	10/18/2018	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<15.0	<15.0	<15.0	<15.0	<15.0	194
SS32	0.5	10/18/2018	<0.0195	<0.0195	<0.0195	<0.0195	<0.0195	<14.9	<14.9	<14.9	<14.9	<14.9	388
SS33	0.5	10/18/2018	<0.0195	<0.0195	<0.0195	<0.0195	<0.0195	<14.9	<14.9	<14.9	<14.9	<14.9	917
SS34	0.5	10/18/2018	<0.0185	<0.0185	<0.0185	<0.0185	<0.0185	<15.0	<15.0	<15.0	<15.0	<15.0	187
SS35	0.5	10/18/2018	<0.0176	<0.0176	<0.0176	<0.0176	<0.0176	<15.0	<15.0	<15.0	<15.0	<15.0	56.2
SS36	0.5	10/18/2018	<0.0193	<0.0193	<0.0193	<0.0193	<0.0193	<15.0	<15.0	<15.0	<15.0	<15.0	29.7
SW11	0.3	10/18/2018	<0.0187	<0.0187	<0.0187	<0.0187	<0.0187	<15.0	<15.0	<15.0	<15.0	<15.0	100
SW12	0.3	10/18/2018	<0.0185	<0.0185	<0.0185	<0.0185	<0.0185	<15.0	<15.0	<15.0	<15.0	<15.0	151
SS37	1	10/22/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	182
SS38	1	10/22/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	316



TABLE 1
SOIL ANALYTICAL RESULTS

NASH DRAW 8 FEDERAL SWD BATTERY #1
REMEDIATION PERMIT NUMBER 2RP-5007
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)
SS39	1	10/22/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<4.96
SS40	1	10/22/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	110
SS41	1	10/22/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	399
SS42	1	10/22/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	363
SS43	1	10/22/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	313
SS44	1	10/22/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	166
SS45	1	10/22/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	107
SS46	1	10/22/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	568
SS47	1	10/22/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	242
SS48	1	10/22/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	131
SS49	1	10/22/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	95.1
SS50	1	10/22/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	102
SS51	1	10/22/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	95.3
SS52	1	10/22/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	6.86
SS53	1	10/22/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	215
SS54	1	10/22/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	101
SS55	1	10/22/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	141
SS56	1	10/22/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	114
SS57	1	10/22/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	90.7
SS58	1	10/22/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	114
SS59	1	10/22/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	58.9
SS60	1	10/22/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	36.5
SS61	1	10/22/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<4.95
SS62	1	10/22/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	6.46
FS03	0 - 1.5	04/19/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	168
FS04	0 - 1.5	04/19/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	53.4



TABLE 1
SOIL ANALYTICAL RESULTS

NASH DRAW 8 FEDERAL SWD BATTERY #1
REMEDIATION PERMIT NUMBER 2RP-5007
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)
FS05	0 - 1.5	04/19/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<14.9	<14.9	<14.9	<14.9	<14.9	9.07
FS06	0 - 1.5	04/19/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	46.3
SW13	0 - 2	04/23/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	42.2	<15.0	42.2	42.2	405
SW14	0 - 2	04/23/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	594
SW15	0 - 2	04/23/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	95.4
SW16	0 - 2	04/23/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	132
PH01	0.5	04/23/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	132
PH02	0.5	04/23/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	28.1	<15.0	28.1	28.1	295
PH03	0.5	04/23/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	18.8	<14.9	18.8	18.8	662
PH01A	1	04/23/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	301
PH02A	1	04/23/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	27.8	<15.0	27.8	27.8	92.7
PH03A	1	04/23/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	17.1	<15.0	17.1	17.1	532
FS07	2	04/23/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	208
FS08	2	04/23/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	15.6	<15.0	15.6	15.6	105
FS09	1.5 - 2	04/25/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	113
FS10	2	04/25/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	104
FS11	2	04/25/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	113
PH04	0.5	05/09/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	307
PH05	1	05/09/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	265
PH06	0.5	05/09/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	247



**TABLE 1
SOIL ANALYTICAL RESULTS**

**NASH DRAW 8 FEDERAL SWD BATTERY #1
REMEDIATION PERMIT NUMBER 2RP-5007
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)
PH04A	2	05/09/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	184
PH05A	2	05/09/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	36.2
PH06A	2	05/09/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	21.5
NMOCD Table 1 Closure Criteria			10	NE	NE	NE	50	NE	NE	NE	NE	100	600

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

NE - not established

TPH - total petroleum hydrocarbons

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



ATTACHMENT 1: INITIAL/FINAL NMOCD FORM C-141 (2RP-5007)

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	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party	OGRID
Contact Name	Contact Telephone
Contact email	Incident # (assigned by OCD)
Contact mailing address	

Location of Release Source

Latitude _____ Longitude _____
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Site Type
Date Release Discovered	API# (if applicable)

Unit Letter	Section	Township	Range	County

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	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

Incident ID	
District RP	
Facility ID	
Application ID	

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

Initial Response

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

☐ The source of the release has been stopped.	
☐ The impacted area has been secured to protect human health and the environment.	
☐ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.	
☐ All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why:	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name: _____	Title: _____
Signature:  _____	Date: 10/9/2018 _____
email: _____	Telephone: _____
<u>OCD Only</u>	
Received by: _____	Date: _____

Incident ID	
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

State of New Mexico
Oil Conservation Division

Page 4

Incident ID	
District RP	
Facility ID	
Application ID	

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

Printed Name: _____ Title: _____

Signature:  _____ Date: 7/19/2019

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

Incident ID	
District RP	2RP-5007
Facility ID	
Application ID	

Remediation Plan

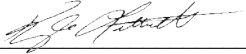
Remediation Plan Checklist: *Each of the following items must be included in the plan.*

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

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

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

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

Printed Name: Kyle Littrell Title: SH&E Supervisor
Signature:  Date: 7/19/2019
email: Kyle_Littrell@xtoenergy.com Telephone: 532-221-7331

OCD Only

Received by: _____ Date: _____

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

Signature: _____ Date: _____

ATTACHMENT 2: LABORATORY ANALYTICAL REPORTS

Analytical Report 601538

for
LT Environmental, Inc.

Project Manager: Adrian Baker

Nash Draw 8 SWD

15-OCT-18

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-27), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-18-17), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-13)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-17)
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-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429)
Xenco-Lakeland: Florida (E84098)



15-OCT-18

Project Manager: **Adrian Baker**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **601538**

Nash Draw 8 SWD

Project Address: NM Eddy

Adrian Baker:

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) 601538. 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. 601538 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,

A handwritten signature in black ink that reads '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 601538****LT Environmental, Inc., Arvada, CO**

Nash Draw 8 SWD

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01	S	10-02-18 10:10	6 In	601538-001
SS02	S	10-02-18 10:20	6 In	601538-002
SS03	S	10-02-18 10:40	6 In	601538-003
SS04	S	10-02-18 10:55	6 In	601538-004
SS05	S	10-02-18 11:00	6 In	601538-005
SS06	S	10-02-18 12:30	6 In	601538-006



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Nash Draw 8 SWD

Project ID:

Work Order Number(s): 601538

Report Date: 15-OCT-18

Date Received: 10/05/2018

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3066343 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



Certificate of Analysis Summary 601538

LT Environmental, Inc., Arvada, CO

Project Name: Nash Draw 8 SWD



Project Id:

Contact: Adrian Baker

Project Location: NM Eddy

Date Received in Lab: Fri Oct-05-18 10:50 am

Report Date: 15-OCT-18

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	601538-001	601538-002	601538-003	601538-004	601538-005	601538-006
	Field Id:	SS01	SS02	SS03	SS04	SS05	SS06
	Depth:	6- In	6- In	6- In	6- In	6- In	6- In
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Oct-02-18 10:10	Oct-02-18 10:20	Oct-02-18 10:40	Oct-02-18 10:55	Oct-02-18 11:00	Oct-02-18 12:30
BTEX by EPA 8021B	Extracted:	Oct-12-18 16:20	Oct-12-18 16:20	Oct-12-18 16:20	Oct-12-18 16:20	Oct-12-18 16:20	Oct-12-18 16:20
	Analyzed:	Oct-13-18 12:28	Oct-13-18 12:48	Oct-13-18 13:08	Oct-13-18 13:29	Oct-13-18 13:49	Oct-13-18 14:09
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00198 0.00198	<0.00200 0.00200	<0.00202 0.00202	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200
Toluene		<0.00198 0.00198	<0.00200 0.00200	<0.00202 0.00202	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200
Ethylbenzene		<0.00198 0.00198	<0.00200 0.00200	<0.00202 0.00202	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200
m,p-Xylenes		<0.00396 0.00396	<0.00401 0.00401	<0.00403 0.00403	<0.00398 0.00398	<0.00399 0.00399	<0.00401 0.00401
o-Xylene		<0.00198 0.00198	<0.00200 0.00200	<0.00202 0.00202	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200
Total Xylenes		<0.00198 0.00198	<0.00200 0.00200	<0.00202 0.00202	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200
Total BTEX		<0.00198 0.00198	<0.00200 0.00200	<0.00202 0.00202	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200
Inorganic Anions by EPA 300	Extracted:	Oct-10-18 10:00	Oct-10-18 10:00	Oct-10-18 09:00	Oct-10-18 10:00	Oct-10-18 16:00	Oct-10-18 16:00
	Analyzed:	Oct-10-18 14:32	Oct-10-18 14:37	Oct-10-18 10:22	Oct-10-18 19:38	Oct-10-18 22:17	Oct-10-18 22:23
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		5210 49.8	1820 50.0	804 5.00	2360 25.0	1760 25.0	4730 50.0
TPH by SW8015 Mod	Extracted:	Oct-08-18 08:00	Oct-08-18 08:00	Oct-08-18 08:00	Oct-08-18 08:00	Oct-08-18 08:00	Oct-08-18 08:00
	Analyzed:	Oct-08-18 17:15	Oct-08-18 17:34	Oct-08-18 17:52	Oct-08-18 18:11	Oct-08-18 18:30	Oct-08-18 18:48
	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	<14.9 14.9	<15.0 15.0
Diesel Range Organics (DRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	1180 15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	24.2 15.0
Total TPH		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	1200 15.0

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

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analytical Results 601538

LT Environmental, Inc., Arvada, CO

Nash Draw 8 SWD

Sample Id: **SS01** Matrix: Soil Date Received: 10.05.18 10.50
 Lab Sample Id: 601538-001 Date Collected: 10.02.18 10.10 Sample Depth: 6 In
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 10.10.18 10.00 Basis: Wet Weight
 Seq Number: 3066067

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	5210	49.8	mg/kg	10.10.18 14.32		10

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 10.08.18 08.00 Basis: Wet Weight
 Seq Number: 3065804

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.08.18 17.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.08.18 17.15	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.08.18 17.15	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.08.18 17.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	10.08.18 17.15	
o-Terphenyl	84-15-1	97	%	70-135	10.08.18 17.15	



Certificate of Analytical Results 601538

LT Environmental, Inc., Arvada, CO

Nash Draw 8 SWD

Sample Id: **SS01**
 Lab Sample Id: 601538-001

Matrix: Soil
 Date Collected: 10.02.18 10.10

Date Received: 10.05.18 10.50
 Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 10.12.18 16.20

Basis: Wet Weight

Seq Number: 3066343

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	10.13.18 12.28	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	10.13.18 12.28	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	10.13.18 12.28	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	10.13.18 12.28	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	10.13.18 12.28	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	10.13.18 12.28	U	1
Total BTEX		<0.00198	0.00198	mg/kg	10.13.18 12.28	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	123	%	70-130	10.13.18 12.28		
4-Bromofluorobenzene	460-00-4	112	%	70-130	10.13.18 12.28		



Certificate of Analytical Results 601538

LT Environmental, Inc., Arvada, CO

Nash Draw 8 SWD

Sample Id: **SS02** Matrix: **Soil** Date Received: 10.05.18 10.50
 Lab Sample Id: 601538-002 Date Collected: 10.02.18 10.20 Sample Depth: 6 In
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: **SCM** % Moisture:
 Analyst: **SCM** Date Prep: 10.10.18 10.00 Basis: **Wet Weight**
 Seq Number: 3066067

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1820	50.0	mg/kg	10.10.18 14.37		10

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: **ARM** % Moisture:
 Analyst: **ARM** Date Prep: 10.08.18 08.00 Basis: **Wet Weight**
 Seq Number: 3065804

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.08.18 17.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.08.18 17.34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.08.18 17.34	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.08.18 17.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	10.08.18 17.34	
o-Terphenyl	84-15-1	93	%	70-135	10.08.18 17.34	



Certificate of Analytical Results 601538

LT Environmental, Inc., Arvada, CO

Nash Draw 8 SWD

Sample Id: SS02
Lab Sample Id: 601538-002

Matrix: Soil
Date Collected: 10.02.18 10.20

Date Received: 10.05.18 10.50
Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 10.12.18 16.20

Basis: Wet Weight

Seq Number: 3066343

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.13.18 12.48	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.13.18 12.48	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.13.18 12.48	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	10.13.18 12.48	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.13.18 12.48	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.13.18 12.48	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.13.18 12.48	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	124	%	70-130	10.13.18 12.48		
1,4-Difluorobenzene	540-36-3	126	%	70-130	10.13.18 12.48		



Certificate of Analytical Results 601538

LT Environmental, Inc., Arvada, CO

Nash Draw 8 SWD

Sample Id: SS03
Lab Sample Id: 601538-003

Matrix: Soil
Date Collected: 10.02.18 10.40

Date Received: 10.05.18 10.50
Sample Depth: 6 In

Analytical Method: Inorganic Anions by EPA 300

Tech: SCM

Analyst: SCM

Seq Number: 3066048

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Date Prep: 10.10.18 09.00

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	804	5.00	mg/kg	10.10.18 10.22		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3065804

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Date Prep: 10.08.18 08.00

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.08.18 17.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.08.18 17.52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.08.18 17.52	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.08.18 17.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	10.08.18 17.52	
o-Terphenyl	84-15-1	96	%	70-135	10.08.18 17.52	



Certificate of Analytical Results 601538

LT Environmental, Inc., Arvada, CO

Nash Draw 8 SWD

Sample Id: **SS03**
 Lab Sample Id: 601538-003

Matrix: Soil
 Date Collected: 10.02.18 10.40

Date Received: 10.05.18 10.50
 Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 10.12.18 16.20

Basis: Wet Weight

Seq Number: 3066343

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	10.13.18 13.08	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	10.13.18 13.08	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	10.13.18 13.08	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	10.13.18 13.08	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	10.13.18 13.08	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	10.13.18 13.08	U	1
Total BTEX		<0.00202	0.00202	mg/kg	10.13.18 13.08	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	123	%	70-130	10.13.18 13.08		
1,4-Difluorobenzene	540-36-3	126	%	70-130	10.13.18 13.08		



Certificate of Analytical Results 601538

LT Environmental, Inc., Arvada, CO

Nash Draw 8 SWD

Sample Id: **SS04** Matrix: Soil Date Received: 10.05.18 10.50
 Lab Sample Id: 601538-004 Date Collected: 10.02.18 10.55 Sample Depth: 6 In
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 10.10.18 10.00 Basis: Wet Weight
 Seq Number: 3066067

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2360	25.0	mg/kg	10.10.18 19.38		5

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 10.08.18 08.00 Basis: Wet Weight
 Seq Number: 3065804

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.08.18 18.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.08.18 18.11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.08.18 18.11	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.08.18 18.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	10.08.18 18.11	
o-Terphenyl	84-15-1	99	%	70-135	10.08.18 18.11	



Certificate of Analytical Results 601538

LT Environmental, Inc., Arvada, CO

Nash Draw 8 SWD

Sample Id: **SS04**
 Lab Sample Id: 601538-004

Matrix: Soil
 Date Collected: 10.02.18 10.55

Date Received: 10.05.18 10.50
 Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 10.12.18 16.20

Basis: Wet Weight

Seq Number: 3066343

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	10.13.18 13.29	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	10.13.18 13.29	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	10.13.18 13.29	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	10.13.18 13.29	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	10.13.18 13.29	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	10.13.18 13.29	U	1
Total BTEX		<0.00199	0.00199	mg/kg	10.13.18 13.29	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	126	%	70-130	10.13.18 13.29		
4-Bromofluorobenzene	460-00-4	120	%	70-130	10.13.18 13.29		



Certificate of Analytical Results 601538

LT Environmental, Inc., Arvada, CO

Nash Draw 8 SWD

Sample Id: **SS05** Matrix: **Soil** Date Received: 10.05.18 10.50
 Lab Sample Id: 601538-005 Date Collected: 10.02.18 11.00 Sample Depth: 6 In
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: **SCM** % Moisture:
 Analyst: **SCM** Date Prep: 10.10.18 16.00 Basis: **Wet Weight**
 Seq Number: 3066072

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1760	25.0	mg/kg	10.10.18 22.17		5

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: **ARM** % Moisture:
 Analyst: **ARM** Date Prep: 10.08.18 08.00 Basis: **Wet Weight**
 Seq Number: 3065804

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	10.08.18 18.30	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	10.08.18 18.30	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	10.08.18 18.30	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	10.08.18 18.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	10.08.18 18.30	
o-Terphenyl	84-15-1	94	%	70-135	10.08.18 18.30	



Certificate of Analytical Results 601538

LT Environmental, Inc., Arvada, CO

Nash Draw 8 SWD

Sample Id: SS05
Lab Sample Id: 601538-005

Matrix: Soil
Date Collected: 10.02.18 11.00

Date Received: 10.05.18 10.50
Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 10.12.18 16.20

Basis: Wet Weight

Seq Number: 3066343

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.13.18 13.49	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.13.18 13.49	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.13.18 13.49	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	10.13.18 13.49	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.13.18 13.49	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.13.18 13.49	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.13.18 13.49	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	124	%	70-130	10.13.18 13.49		
1,4-Difluorobenzene	540-36-3	127	%	70-130	10.13.18 13.49		



Certificate of Analytical Results 601538

LT Environmental, Inc., Arvada, CO

Nash Draw 8 SWD

Sample Id: **SS06** Matrix: Soil Date Received: 10.05.18 10.50
 Lab Sample Id: 601538-006 Date Collected: 10.02.18 12.30 Sample Depth: 6 In
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 10.10.18 16.00 Basis: Wet Weight
 Seq Number: 3066072

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	4730	50.0	mg/kg	10.10.18 22.23		10

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 10.08.18 08.00 Basis: Wet Weight
 Seq Number: 3065804

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.08.18 18.48	U	1
Diesel Range Organics (DRO)	C10C28DRO	1180	15.0	mg/kg	10.08.18 18.48		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	24.2	15.0	mg/kg	10.08.18 18.48		1
Total TPH	PHC635	1200	15.0	mg/kg	10.08.18 18.48		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	10.08.18 18.48	
o-Terphenyl	84-15-1	122	%	70-135	10.08.18 18.48	



Certificate of Analytical Results 601538

LT Environmental, Inc., Arvada, CO

Nash Draw 8 SWD

Sample Id: **SS06**
 Lab Sample Id: 601538-006

Matrix: Soil
 Date Collected: 10.02.18 12.30

Date Received: 10.05.18 10.50
 Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 10.12.18 16.20

Basis: Wet Weight

Seq Number: 3066343

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.13.18 14.09	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.13.18 14.09	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.13.18 14.09	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	10.13.18 14.09	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.13.18 14.09	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.13.18 14.09	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.13.18 14.09	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	129	%	70-130	10.13.18 14.09		
1,4-Difluorobenzene	540-36-3	123	%	70-130	10.13.18 14.09		



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



LT Environmental, Inc.

Nash Draw 8 SWD

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3066048

MB Sample Id: 7663866-1-BLK

Matrix: Solid

LCS Sample Id: 7663866-1-BKS

Prep Method: E300P

Date Prep: 10.10.18

LCSD Sample Id: 7663866-1-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	254	102	254	102	90-110	0	20	mg/kg	10.10.18 10:11	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3066072

MB Sample Id: 7663867-1-BLK

Matrix: Solid

LCS Sample Id: 7663867-1-BKS

Prep Method: E300P

Date Prep: 10.10.18

LCSD Sample Id: 7663867-1-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	253	101	90-110	0	20	mg/kg	10.10.18 13:18	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3066072

MB Sample Id: 7663921-1-BLK

Matrix: Solid

LCS Sample Id: 7663921-1-BKS

Prep Method: E300P

Date Prep: 10.10.18

LCSD Sample Id: 7663921-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	253	101	253	101	90-110	0	20	mg/kg	10.10.18 20:06	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3066048

Parent Sample Id: 601538-003

Matrix: Soil

MS Sample Id: 601538-003 S

Prep Method: E300P

Date Prep: 10.10.18

MSD Sample Id: 601538-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	804	250	1060	102	1060	102	90-110	0	20	mg/kg	10.10.18 10:28	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3066048

Parent Sample Id: 601546-001

Matrix: Soil

MS Sample Id: 601546-001 S

Prep Method: E300P

Date Prep: 10.10.18

MSD Sample Id: 601546-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.850	248	261	105	264	106	90-110	1	20	mg/kg	10.10.18 11:47	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 $\text{Log Diff.} = \text{Log}(\text{Sample Duplicate}) - \text{Log}(\text{Original Sample})$

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



LT Environmental, Inc.

Nash Draw 8 SWD

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3066067

Parent Sample Id: 601591-001

Matrix: Soil

MS Sample Id: 601591-001 S

Prep Method: E300P

Date Prep: 10.10.18

MSD Sample Id: 601591-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	741	249	958	87	959	88	90-110	0	20	mg/kg	10.10.18 13:35	X

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3066067

Parent Sample Id: 601594-001

Matrix: Soil

MS Sample Id: 601594-001 S

Prep Method: E300P

Date Prep: 10.10.18

MSD Sample Id: 601594-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	10.4	248	263	102	263	102	90-110	0	20	mg/kg	10.10.18 15:00	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3066072

Parent Sample Id: 601906-004

Matrix: Soil

MS Sample Id: 601906-004 S

Prep Method: E300P

Date Prep: 10.10.18

MSD Sample Id: 601906-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	112	248	362	101	362	101	90-110	0	20	mg/kg	10.10.18 20:23	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3066072

Parent Sample Id: 601906-014

Matrix: Soil

MS Sample Id: 601906-014 S

Prep Method: E300P

Date Prep: 10.10.18

MSD Sample Id: 601906-014 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	6.06	250	272	106	271	106	90-110	0	20	mg/kg	10.10.18 21:43	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3065804

MB Sample Id: 7663747-1-BLK

Matrix: Solid

LCS Sample Id: 7663747-1-BKS

Prep Method: TX1005P

Date Prep: 10.08.18

LCSD Sample Id: 7663747-1-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	936	94	948	95	70-135	1	20	mg/kg	10.08.18 11:22	
Diesel Range Organics (DRO)	<8.13	1000	983	98	966	97	70-135	2	20	mg/kg	10.08.18 11:22	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	92		97		128		70-135	%	10.08.18 11:22
o-Terphenyl	97		101		104		70-135	%	10.08.18 11:22

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C-A) / B$
 $RPD = 200 * |(C-E) / (C+E)|$
 $[D] = 100 * (C) / [B]$
 $\text{Log Diff.} = \text{Log}(\text{Sample Duplicate}) - \text{Log}(\text{Original Sample})$

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



LT Environmental, Inc.

Nash Draw 8 SWD

Analytical Method: TPH by SW8015 Mod

Seq Number: 3065804

Parent Sample Id: 601524-021

Matrix: Soil

MS Sample Id: 601524-021 S

Prep Method: TX1005P

Date Prep: 10.08.18

MSD Sample Id: 601524-021 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)	<7.98	997	903	91	915	92	70-135	1	20	mg/kg	10.08.18 12:17	
Diesel Range Organics (DRO)	<8.10	997	947	95	957	96	70-135	1	20	mg/kg	10.08.18 12:17	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	125		126		70-135	%	10.08.18 12:17
o-Terphenyl	96		96		70-135	%	10.08.18 12:17

Analytical Method: BTEX by EPA 8021B

Seq Number: 3066343

MB Sample Id: 7664149-1-BLK

Matrix: Solid

LCS Sample Id: 7664149-1-BKS

Prep Method: SW5030B

Date Prep: 10.12.18

LCSD Sample Id: 7664149-1-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	0.0990	99	0.0968	97	70-130	2	35	mg/kg	10.13.18 05:49	
Toluene	<0.00200	0.100	0.0966	97	0.0898	90	70-130	7	35	mg/kg	10.13.18 05:49	
Ethylbenzene	<0.00200	0.100	0.0902	90	0.0827	83	70-130	9	35	mg/kg	10.13.18 05:49	
m,p-Xylenes	<0.00400	0.200	0.180	90	0.166	83	70-130	8	35	mg/kg	10.13.18 05:49	
o-Xylene	<0.00200	0.100	0.0924	92	0.0861	86	70-130	7	35	mg/kg	10.13.18 05:49	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	122		97		105		70-130	%	10.13.18 05:49
4-Bromofluorobenzene	114		87		90		70-130	%	10.13.18 05:49

Analytical Method: BTEX by EPA 8021B

Seq Number: 3066343

Parent Sample Id: 601524-021

Matrix: Soil

MS Sample Id: 601524-021 S

Prep Method: SW5030B

Date Prep: 10.12.18

MSD Sample Id: 601524-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.0916	92	0.0924	91	70-130	1	35	mg/kg	10.13.18 06:29	
Toluene	<0.00201	0.100	0.0873	87	0.0859	85	70-130	2	35	mg/kg	10.13.18 06:29	
Ethylbenzene	<0.00201	0.100	0.0784	78	0.0784	78	70-130	0	35	mg/kg	10.13.18 06:29	
m,p-Xylenes	<0.00402	0.201	0.157	78	0.158	79	70-130	1	35	mg/kg	10.13.18 06:29	
o-Xylene	<0.00201	0.100	0.0798	80	0.0805	80	70-130	1	35	mg/kg	10.13.18 06:29	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		100		70-130	%	10.13.18 06:29
4-Bromofluorobenzene	97		94		70-130	%	10.13.18 06:29

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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



Setting the Standard since 1990
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CHAIN OF CUSTODY
Page 1 of 1

Page 1 of 1

**San Antonio, Texas (210-509-3334,
Midland, Texas (432-704-5251)**

www.xenco.com

Phoenix, Arizona (480-355-0900)

Client / Reporting Information				Project Information				Analytical Information				Matrix Codes				
Company Name / Branch: <u>LT Environmental, Inc.</u> <u>Pelican Office</u>				Project Name/Number: <u>Nash Draw & SWD</u>								W = Water S = Soil/Sediment GW = Ground Water DW = Drinking Water P = Product SW = Surface water SL = Sludge OW = Ocean/Sea Water WI = Wipe O = Oil WM = Waste Water A = Air				
Company Address: <u>3300 Nth St. Building Unit 103 Midway, TX 75720</u>				Project Location: <u>NM EDDY</u>												
Email: <u>ababer@ltenv.com</u> Phone No: <u>(432) 704-5178</u>				Invoice To: <u>XTO Energy - Kyle Little</u>												
Project Contact: <u>Adrian Baker</u>				PO Number:												
Samples Name: <u>L. Lawrence</u>																
No.	Field ID / Point of Collection	Sample Depth	Date	Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Notes	Field Comments
1		SS01	6"	10/6/2	10:10	S	1									
2		SS02	6"		10:20	S	1									
3		SS03	6"		10:40	S	1									
4		SS04	6"		10:55	S	1									
5		SS05	6"		11:00	S	1									
6		SS06	6"		12:30	S	1									
7																
8																
9																
10																
Turnaround Time (Business days)				Data Deliverable Information								Notes:				
☐ Same Day TAT				☐ 5 Day TAT				☐ Level II Std QC				☐ Level IV (Full Data Pkg raw data)				
☐ Next Day EMERGENCY				☐ 7 Day TAT				☐ Level III Std QC+ Forms				☐ TRRP Level IV				
☐ 2 Day EMERGENCY				☒ Contract TAT				☐ Level 3 (CLP Forms)				☐ UST / RG 411				
☐ 3 Day EMERGENCY								☐ TRRP Checklist								
TAT Starts Day received by Lab, if received by 5:00 pm																
SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY																
Relinquished By Sample # <u>1</u>				Date Time: <u>10/6/24 6:30</u>				Received By: <u>Fac-Water Protection</u>				Relinquished By: <u>T.H. Little</u>				
Relinquished By: <u>1</u>				Date Time:				Received By: <u>2</u>				Relinquished By: <u>2</u>				
Relinquished By: <u>3</u>				Date Time:				Received By: <u>4</u>				Relinquished By: <u>4</u>				
Relinquished By: <u>5</u>				Date Time:				Received By: <u>5</u>				Relinquished By: <u>5</u>				
FED-EX / UPS: Tracking # <u>7734122815025</u>				Office Caplet Temp. <u>41.0°C</u>				Thermo-Corr. Factor <u>0.0</u>								

Notice: Notice Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the Client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75 will be applied to each project. Xenco's liability will be limited to the cost of samples. Any samples received by Xenco but not analyzed will be invoiced at \$5 per sample. These terms will be enforced unless previously negotiated under a fully executed client contract.



Client: LT Environmental, Inc.

Date/ Time Received: 10/05/2018 10:50:00 AM

Work Order #: 601538

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)?	4.1
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	No
#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:

Katie Lowe

Date: 10/05/2018

Checklist reviewed by:

Jessica Kramer

Date: 10/05/2018

Analytical Report 602569

for
LT Environmental, Inc.

Project Manager: Adrian Baker

Nash Draw #8 Federal

24-OCT-18

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-28), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-18-17), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)
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-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429)
Xenco-Lakeland: Florida (E84098)



24-OCT-18

Project Manager: **Adrian Baker**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **602569**

Nash Draw #8 Federal

Project Address: Delaware Basin

Adrian Baker:

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) 602569. 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. 602569 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,

A handwritten signature in black ink that reads '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 602569****LT Environmental, Inc., Arvada, CO**

Nash Draw #8 Federal

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS07	S	10-12-18 12:40	1.5 ft	602569-001
SS08	S	10-12-18 12:45	1.5 ft	602569-002
SS09	S	10-12-18 13:50	1.5 ft	602569-003
FS01	S	10-12-18 14:25	2 ft	602569-004
FS02	S	10-12-18 14:35	2 ft	602569-005
SW01	S	10-12-18 14:45	1.5 ft	602569-006
SW02	S	10-12-18 14:44	1.5 ft	602569-007



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Nash Draw #8 Federal

Project ID:
Work Order Number(s): 602569

Report Date: 24-OCT-18
Date Received: 10/17/2018

Sample receipt non conformances and comments:

Per clients email, corrected project name to Nash Draw #8 Federal. JKR 10/24/18 NEW VERSION GENERATED

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3066834 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3067221 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



Certificate of Analysis Summary 602569

LT Environmental, Inc., Arvada, CO

Project Name: Nash Draw #8 Federal



Project Id:

Contact: Adrian Baker

Project Location: Delaware Basin

Date Received in Lab: Wed Oct-17-18 10:50 am

Report Date: 24-OCT-18

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	602569-001	602569-002	602569-003	602569-004	602569-005	602569-006
	<i>Field Id:</i>	SS07	SS08	SS09	FS01	FS02	SW01
	<i>Depth:</i>	1.5- ft	1.5- ft	1.5- ft	2- ft	2- ft	1.5- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Oct-12-18 12:40	Oct-12-18 12:45	Oct-12-18 13:50	Oct-12-18 14:25	Oct-12-18 14:35	Oct-12-18 14:45
BTEX by EPA 8021B	<i>Extracted:</i>	Oct-22-18 16:00	Oct-22-18 16:00	Oct-18-18 10:00	Oct-22-18 16:00	Oct-22-18 16:00	Oct-22-18 16:00
	<i>Analyzed:</i>	Oct-23-18 05:26	Oct-23-18 05:46	Oct-18-18 14:35	Oct-23-18 06:06	Oct-23-18 07:24	Oct-23-18 07:44
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00202 0.00202
Toluene		<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00202 0.00202
Ethylbenzene		<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00202 0.00202
m,p-Xylenes		<0.00401 0.00401	<0.00398 0.00398	<0.00398 0.00398	<0.00399 0.00399	<0.00402 0.00402	<0.00403 0.00403
o-Xylene		<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00202 0.00202
Total Xylenes		<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00202 0.00202
Total BTEX		<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00202 0.00202
Inorganic Anions by EPA 300	<i>Extracted:</i>	Oct-20-18 16:30	Oct-20-18 16:30	Oct-20-18 16:30	Oct-20-18 16:30	Oct-20-18 16:30	Oct-20-18 16:30
	<i>Analyzed:</i>	Oct-22-18 09:58	Oct-22-18 10:03	Oct-22-18 10:09	Oct-22-18 10:14	Oct-22-18 10:30	Oct-22-18 10:35
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		120 5.00	247 4.95	154 4.95	233 4.99	142 5.00	199 4.95
TPH by SW8015 Mod	<i>Extracted:</i>	Oct-17-18 17:00	Oct-17-18 17:00	Oct-17-18 17:00	Oct-17-18 17:00	Oct-17-18 17:00	Oct-17-18 17:00
	<i>Analyzed:</i>	Oct-17-18 23:51	Oct-18-18 00:09	Oct-18-18 00:28	Oct-18-18 01:22	Oct-18-18 01:41	Oct-18-18 01:59
	<i>Units/RL:</i>	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	<14.9 14.9	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0
Diesel Range Organics (DRO)		<15.0 15.0	<14.9 14.9	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<14.9 14.9	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0
Total TPH		<15.0 15.0	<14.9 14.9	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0

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

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 602569

LT Environmental, Inc., Arvada, CO

Project Name: Nash Draw #8 Federal



Project Id:

Contact: Adrian Baker

Project Location: Delaware Basin

Date Received in Lab: Wed Oct-17-18 10:50 am

Report Date: 24-OCT-18

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	602569-007					
	Field Id:	SW02					
	Depth:	1.5- ft					
	Matrix:	SOIL					
	Sampled:	Oct-12-18 14:44					
BTEX by EPA 8021B	Extracted:	Oct-22-18 16:00					
	Analyzed:	Oct-23-18 08:05					
	Units/RL:	mg/kg RL					
Benzene		<0.00200 0.00200					
Toluene		<0.00200 0.00200					
Ethylbenzene		<0.00200 0.00200					
m,p-Xylenes		<0.00401 0.00401					
o-Xylene		<0.00200 0.00200					
Total Xylenes		<0.00200 0.00200					
Total BTEX		<0.00200 0.00200					
Inorganic Anions by EPA 300	Extracted:	Oct-20-18 16:30					
	Analyzed:	Oct-22-18 10:41					
	Units/RL:	mg/kg RL					
Chloride		22.2 5.00					
TPH by SW8015 Mod	Extracted:	Oct-17-18 17:00					
	Analyzed:	Oct-18-18 02:17					
	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					

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

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analytical Results 602569

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: SS07
Lab Sample Id: 602569-001

Matrix: Soil
Date Collected: 10.12.18 12.40

Date Received: 10.17.18 10.50
Sample Depth: 1.5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3067144

Date Prep: 10.20.18 16.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	120	5.00	mg/kg	10.22.18 09.58		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3066699

Date Prep: 10.17.18 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.17.18 23.51	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.17.18 23.51	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.17.18 23.51	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.17.18 23.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	10.17.18 23.51	
o-Terphenyl	84-15-1	97	%	70-135	10.17.18 23.51	



Certificate of Analytical Results 602569

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: SS07
Lab Sample Id: 602569-001

Matrix: Soil
Date Collected: 10.12.18 12.40

Date Received: 10.17.18 10.50
Sample Depth: 1.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 10.22.18 16.00

Basis: Wet Weight

Seq Number: 3067221

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.23.18 05.26	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.23.18 05.26	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.23.18 05.26	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	10.23.18 05.26	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.23.18 05.26	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.23.18 05.26	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.23.18 05.26	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	111	%	70-130	10.23.18 05.26		
4-Bromofluorobenzene	460-00-4	99	%	70-130	10.23.18 05.26		



Certificate of Analytical Results 602569

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **SS08** Matrix: Soil Date Received: 10.17.18 10.50
 Lab Sample Id: 602569-002 Date Collected: 10.12.18 12.45 Sample Depth: 1.5 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 10.20.18 16.30 Basis: Wet Weight
 Seq Number: 3067144

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	247	4.95	mg/kg	10.22.18 10.03		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 10.17.18 17.00 Basis: Wet Weight
 Seq Number: 3066699

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	10.18.18 00.09	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	10.18.18 00.09	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	10.18.18 00.09	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	10.18.18 00.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	10.18.18 00.09	
o-Terphenyl	84-15-1	96	%	70-135	10.18.18 00.09	



Certificate of Analytical Results 602569

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **SS08**
 Lab Sample Id: 602569-002

Matrix: Soil
 Date Collected: 10.12.18 12.45

Date Received: 10.17.18 10.50
 Sample Depth: 1.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 10.22.18 16.00

Basis: Wet Weight

Seq Number: 3067221

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	10.23.18 05.46	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	10.23.18 05.46	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	10.23.18 05.46	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	10.23.18 05.46	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	10.23.18 05.46	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	10.23.18 05.46	U	1
Total BTEX		<0.00199	0.00199	mg/kg	10.23.18 05.46	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	100	%	70-130	10.23.18 05.46		
1,4-Difluorobenzene	540-36-3	113	%	70-130	10.23.18 05.46		



Certificate of Analytical Results 602569

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **SS09**
 Lab Sample Id: 602569-003

Matrix: Soil
 Date Collected: 10.12.18 13.50

Date Received: 10.17.18 10.50
 Sample Depth: 1.5 ft

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 10.20.18 16.30

Basis: Wet Weight

Seq Number: 3067144

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	154	4.95	mg/kg	10.22.18 10.09		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 10.17.18 17.00

Basis: Wet Weight

Seq Number: 3066699

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	10.18.18 00.28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	10.18.18 00.28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	10.18.18 00.28	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	10.18.18 00.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	10.18.18 00.28	
o-Terphenyl	84-15-1	90	%	70-135	10.18.18 00.28	



Certificate of Analytical Results 602569

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **SS09**
 Lab Sample Id: 602569-003

Matrix: Soil
 Date Collected: 10.12.18 13.50

Date Received: 10.17.18 10.50
 Sample Depth: 1.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 10.18.18 10.00

Basis: Wet Weight

Seq Number: 3066834

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	10.18.18 14.35	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	10.18.18 14.35	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	10.18.18 14.35	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	10.18.18 14.35	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	10.18.18 14.35	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	10.18.18 14.35	U	1
Total BTEX		<0.00199	0.00199	mg/kg	10.18.18 14.35	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	110	%	70-130	10.18.18 14.35		
1,4-Difluorobenzene	540-36-3	118	%	70-130	10.18.18 14.35		



Certificate of Analytical Results 602569

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **FS01**
 Lab Sample Id: 602569-004

Matrix: Soil
 Date Collected: 10.12.18 14.25

Date Received: 10.17.18 10.50
 Sample Depth: 2 ft

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 10.20.18 16.30

Basis: Wet Weight

Seq Number: 3067144

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	233	4.99	mg/kg	10.22.18 10.14		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 10.17.18 17.00

Basis: Wet Weight

Seq Number: 3066699

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.18.18 01.22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.18.18 01.22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.18.18 01.22	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.18.18 01.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	10.18.18 01.22	
o-Terphenyl	84-15-1	86	%	70-135	10.18.18 01.22	



Certificate of Analytical Results 602569

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **FS01**
 Lab Sample Id: 602569-004

Matrix: Soil
 Date Collected: 10.12.18 14.25

Date Received: 10.17.18 10.50
 Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 10.22.18 16.00

Basis: Wet Weight

Seq Number: 3067221

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.23.18 06.06	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.23.18 06.06	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.23.18 06.06	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	10.23.18 06.06	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.23.18 06.06	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.23.18 06.06	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.23.18 06.06	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	105	%	70-130	10.23.18 06.06		
4-Bromofluorobenzene	460-00-4	94	%	70-130	10.23.18 06.06		



Certificate of Analytical Results 602569

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **FS02**
 Lab Sample Id: 602569-005

Matrix: Soil
 Date Collected: 10.12.18 14.35

Date Received: 10.17.18 10.50
 Sample Depth: 2 ft

Analytical Method: Inorganic Anions by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 10.20.18 16.30

Basis: Wet Weight

Seq Number: 3067144

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	142	5.00	mg/kg	10.22.18 10.30		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 10.17.18 17.00

Basis: Wet Weight

Seq Number: 3066699

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.18.18 01.41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.18.18 01.41	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.18.18 01.41	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.18.18 01.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	10.18.18 01.41	
o-Terphenyl	84-15-1	83	%	70-135	10.18.18 01.41	



Certificate of Analytical Results 602569

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **FS02**
 Lab Sample Id: 602569-005

Matrix: Soil
 Date Collected: 10.12.18 14.35

Date Received: 10.17.18 10.50
 Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 10.22.18 16.00

Basis: Wet Weight

Seq Number: 3067221

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	10.23.18 07.24	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	10.23.18 07.24	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	10.23.18 07.24	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	10.23.18 07.24	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	10.23.18 07.24	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	10.23.18 07.24	U	1
Total BTEX		<0.00201	0.00201	mg/kg	10.23.18 07.24	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	96	%	70-130	10.23.18 07.24		
1,4-Difluorobenzene	540-36-3	98	%	70-130	10.23.18 07.24		



Certificate of Analytical Results 602569

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **SW01**
 Lab Sample Id: 602569-006

Matrix: Soil
 Date Collected: 10.12.18 14.45

Date Received: 10.17.18 10.50
 Sample Depth: 1.5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3067144

Date Prep: 10.20.18 16.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	199	4.95	mg/kg	10.22.18 10.35		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3066699

Date Prep: 10.17.18 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.18.18 01.59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.18.18 01.59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.18.18 01.59	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.18.18 01.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	10.18.18 01.59	
o-Terphenyl	84-15-1	88	%	70-135	10.18.18 01.59	



Certificate of Analytical Results 602569

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **SW01**
 Lab Sample Id: 602569-006

Matrix: Soil
 Date Collected: 10.12.18 14.45

Date Received: 10.17.18 10.50
 Sample Depth: 1.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 10.22.18 16.00

Basis: Wet Weight

Seq Number: 3067221

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	10.23.18 07.44	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	10.23.18 07.44	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	10.23.18 07.44	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	10.23.18 07.44	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	10.23.18 07.44	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	10.23.18 07.44	U	1
Total BTEX		<0.00202	0.00202	mg/kg	10.23.18 07.44	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	110	%	70-130	10.23.18 07.44		
4-Bromofluorobenzene	460-00-4	93	%	70-130	10.23.18 07.44		



Certificate of Analytical Results 602569

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **SW02**
 Lab Sample Id: 602569-007

Matrix: Soil
 Date Collected: 10.12.18 14.44

Date Received: 10.17.18 10.50
 Sample Depth: 1.5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3067144

Date Prep: 10.20.18 16.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	22.2	5.00	mg/kg	10.22.18 10.41		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3066699

Date Prep: 10.17.18 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.18.18 02.17	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.18.18 02.17	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.18.18 02.17	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.18.18 02.17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	10.18.18 02.17	
o-Terphenyl	84-15-1	85	%	70-135	10.18.18 02.17	



Certificate of Analytical Results 602569

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **SW02**
 Lab Sample Id: 602569-007

Matrix: Soil
 Date Collected: 10.12.18 14.44

Date Received: 10.17.18 10.50
 Sample Depth: 1.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 10.22.18 16.00

Basis: Wet Weight

Seq Number: 3067221

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.23.18 08.05	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.23.18 08.05	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.23.18 08.05	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	10.23.18 08.05	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.23.18 08.05	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.23.18 08.05	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.23.18 08.05	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	107	%	70-130	10.23.18 08.05		
4-Bromofluorobenzene	460-00-4	107	%	70-130	10.23.18 08.05		



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



LT Environmental, Inc.

Nash Draw #8 Federal

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3067144

MB Sample Id: 7664563-1-BLK

Matrix: Solid

LCS Sample Id: 7664563-1-BKS

Prep Method: E300P

Date Prep: 10.20.18

LCSD Sample Id: 7664563-1-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	274	110	275	110	90-110	0	20	mg/kg	10.22.18 09:32	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3067144

Parent Sample Id: 602357-002

Matrix: Soil

MS Sample Id: 602357-002 S

Prep Method: E300P

Date Prep: 10.20.18

MSD Sample Id: 602357-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	221	249	531	124	531	124	90-110	0	20	mg/kg	10.22.18 09:48	X

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3067144

Parent Sample Id: 602570-003

Matrix: Soil

MS Sample Id: 602570-003 S

Prep Method: E300P

Date Prep: 10.20.18

MSD Sample Id: 602570-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.853	249	271	109	270	108	90-110	0	20	mg/kg	10.22.18 11:02	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3066699

MB Sample Id: 7664343-1-BLK

Matrix: Solid

LCS Sample Id: 7664343-1-BKS

Prep Method: TX1005P

Date Prep: 10.17.18

LCSD Sample Id: 7664343-1-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	941	94	1020	102	70-135	8	20	mg/kg	10.17.18 20:29	
Diesel Range Organics (DRO)	<8.13	1000	1080	108	1080	108	70-135	0	20	mg/kg	10.17.18 20:29	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	108		127		126		70-135	%	10.17.18 20:29
o-Terphenyl	112		102		110		70-135	%	10.17.18 20:29

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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



LT Environmental, Inc.

Nash Draw #8 Federal

Analytical Method: TPH by SW8015 Mod

Seq Number: 3066699

Parent Sample Id: 602462-001

Matrix: Soil

MS Sample Id: 602462-001 S

Prep Method: TX1005P

Date Prep: 10.17.18

MSD Sample Id: 602462-001 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)	<7.99	999	984	98	986	99	70-135	0	20	mg/kg	10.17.18 21:24	
Diesel Range Organics (DRO)	13.6	999	1080	107	1050	104	70-135	3	20	mg/kg	10.17.18 21:24	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	127		120		70-135	%	10.17.18 21:24
o-Terphenyl	112		104		70-135	%	10.17.18 21:24

Analytical Method: BTEX by EPA 8021B

Seq Number: 3066834

MB Sample Id: 7664423-1-BLK

Matrix: Solid

LCS Sample Id: 7664423-1-BKS

Prep Method: SW5030B

Date Prep: 10.18.18

LCSD Sample Id: 7664423-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.124	123	0.126	126	70-130	2	35	mg/kg	10.18.18 12:26	
Toluene	<0.00202	0.101	0.108	107	0.108	108	70-130	0	35	mg/kg	10.18.18 12:26	
Ethylbenzene	<0.00202	0.101	0.117	116	0.120	120	70-130	3	35	mg/kg	10.18.18 12:26	
m,p-Xylenes	<0.00102	0.202	0.247	122	0.238	118	70-130	4	35	mg/kg	10.18.18 12:26	
o-Xylene	<0.00202	0.101	0.123	122	0.126	126	70-130	2	35	mg/kg	10.18.18 12:26	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	112		127		116		70-130	%	10.18.18 12:26
4-Bromofluorobenzene	90		120		121		70-130	%	10.18.18 12:26

Analytical Method: BTEX by EPA 8021B

Seq Number: 3067221

MB Sample Id: 7664675-1-BLK

Matrix: Solid

LCS Sample Id: 7664675-1-BKS

Prep Method: SW5030B

Date Prep: 10.22.18

LCSD Sample Id: 7664675-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.113	113	0.116	115	70-130	3	35	mg/kg	10.23.18 01:05	
Toluene	<0.00201	0.100	0.105	105	0.108	107	70-130	3	35	mg/kg	10.23.18 01:05	
Ethylbenzene	<0.00201	0.100	0.104	104	0.0964	95	70-130	8	35	mg/kg	10.23.18 01:05	
m,p-Xylenes	<0.00402	0.201	0.187	93	0.182	90	70-130	3	35	mg/kg	10.23.18 01:05	
o-Xylene	<0.00201	0.100	0.0840	84	0.0977	97	70-130	15	35	mg/kg	10.23.18 01:05	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	111		89		93		70-130	%	10.23.18 01:05
4-Bromofluorobenzene	79		71		83		70-130	%	10.23.18 01:05

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* |(C-E) / (C+E)|
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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



LT Environmental, Inc.

Nash Draw #8 Federal

Analytical Method: BTEX by EPA 8021B

Seq Number: 3066834

Parent Sample Id: 602569-003

Matrix: Soil

MS Sample Id: 602569-003 S

Prep Method: SW5030B

Date Prep: 10.18.18

MSD Sample Id: 602569-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0845	85	0.0939	94	70-130	11	35	mg/kg	10.18.18 13:09	
Toluene	<0.00200	0.100	0.0751	75	0.0822	82	70-130	9	35	mg/kg	10.18.18 13:09	
Ethylbenzene	<0.00200	0.100	0.0880	88	0.0966	97	70-130	9	35	mg/kg	10.18.18 13:09	
m,p-Xylenes	<0.00400	0.200	0.177	89	0.193	97	70-130	9	35	mg/kg	10.18.18 13:09	
o-Xylene	<0.00200	0.100	0.0868	87	0.0952	95	70-130	9	35	mg/kg	10.18.18 13:09	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	121		120		70-130	%	10.18.18 13:09
4-Bromofluorobenzene	126		122		70-130	%	10.18.18 13:09

Analytical Method: BTEX by EPA 8021B

Seq Number: 3067221

Parent Sample Id: 602976-001

Matrix: Soil

MS Sample Id: 602976-001 S

Prep Method: SW5030B

Date Prep: 10.22.18

MSD Sample Id: 602976-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.102	102	0.0910	91	70-130	11	35	mg/kg	10.23.18 01:45	
Toluene	<0.00199	0.0996	0.0911	91	0.0802	80	70-130	13	35	mg/kg	10.23.18 01:45	
Ethylbenzene	<0.00199	0.0996	0.0773	78	0.0674	67	70-130	14	35	mg/kg	10.23.18 01:45	X
m,p-Xylenes	<0.00398	0.199	0.146	73	0.128	64	70-130	13	35	mg/kg	10.23.18 01:45	X
o-Xylene	<0.00199	0.0996	0.0703	71	0.0617	62	70-130	13	35	mg/kg	10.23.18 01:45	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	94		95		70-130	%	10.23.18 01:45
4-Bromofluorobenzene	80		78		70-130	%	10.23.18 01:45

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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



Chain of Custody

Work Order No: 2024

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) 365-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813)

Page 1 of 1

Project Manager:	Adrian Baker	Bill to: (if different)	Kyle Littlell
Company Name:	LT Environmental	Company Name:	XTD
Address:	3300 'A' street, Building 1, #103	Address:	
City, State ZIP:	Midland, Tx 79705	City, State ZIP:	
Phone:	(432) 704-5178	Email:	ABaker@LTENV.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:	Nash Draw #8 Federal	Turn Around	
Project Number:		Routine	☒
P.O. Number:		Rush:	
Sampler's Name:	Fabian Urbani	Due Date:	

SAMPLE RECEIPT

Temp Blank:	Yes No	Wet Ice:	Yes No
Temperature ($^{\circ}$ C):	OZ	Thermometer ID:	DG
Received intact:	yes No		
Cooler Custody Seals:	Yes No N/A	Correction Factor:	0.0
Sample Custody Seals:	Yes No N/A	Total Containers:	

Number of Containers

EX(only BTEX)
(ORO)(GRO)(URO)
batches (300.00)

ANALYSIS REQUEST							Work Order Notes
TAT starts the day received by the lab, if received by 4:30pm							

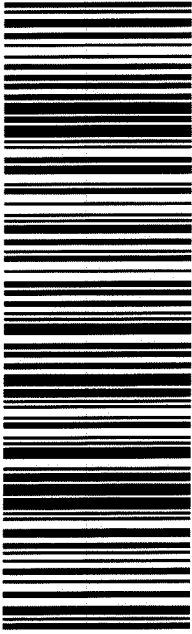
[illegible]

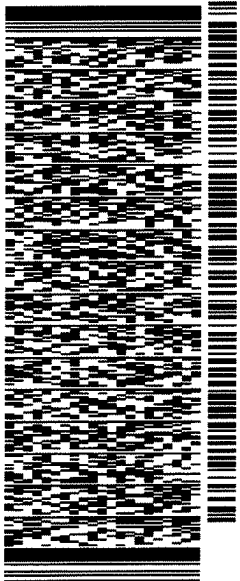
Total	200.7 / 6010	200.8 / 6020.	
<i>Circle Method(s) and Metal(s) to be analyzed</i>	8RCRA TCLP / SPLP 6010:	Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO ₂ Na Sr Ti Sn U V Zn	13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO ₂ Na Sr Ti Sn U V Zn
		Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U	
			1631 / 245.1 / 7470 / 7471 : Hg

Notwithstanding to whom the samples are submitted, the client agrees to assign standard terms and conditions of service. Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 <i>[Signature]</i>	<i>[Signature]</i>	10/15/18 17:18	2 <i>[Signature]</i>	<i>[Signature]</i>	10/16/18 15:30
3			4		
5			6		

ORIGIN ID:CAOA (575) 887-6245 XENCO PAC N MAIL 910 W PIERCE ST CARLSBAD, NM 88220 UNITED STATES US	SHIP DATE: 16OCT18 ACTWGT: 26.00 LB CAD: 101813706INET4040 DIMS: 26x14x12 IN BILL RECIPIENT
TO: HOLD FOR XENCO FEDEX EXPRESS SHIP CENTER FEDEX SHIP CENTER 3600 COUNTY RD 1276 S MIDLAND TX 79711 (806) 794-1296 INV: REF: PO: DEPT:	
552J1188FB/DCA5	

TRK# 7734 9299 9728 0201 41 MAFA TX-US LBB WED - 17 OCT HOLD STANDARD OVERNIGHT HLD	
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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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Client: LT Environmental, Inc.

Date/ Time Received: 10/17/2018 10:50:00 AM

Work Order #: 602569

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)?	.2
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	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: 10/17/2018

Checklist reviewed by:

Jessica Kramer

Date: 10/18/2018

Analytical Report 602722

for
LT Environmental, Inc.

Project Manager: Adrian Baker

Nash Draw #8 Federal

012918153

23-OCT-18

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-18-28), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (T104704295-18-17), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)

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-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)

Xenco-Atlanta (LELAP Lab ID #04176)

Xenco-Tampa: Florida (E87429)

Xenco-Lakeland: Florida (E84098)



23-OCT-18

Project Manager: **Adrian Baker**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **602722**

Nash Draw #8 Federal

Project Address: Delaware Basin

Adrian Baker:

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) 602722. 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. 602722 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,

A handwritten signature in black ink that reads '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 602722****LT Environmental, Inc., Arvada, CO**

Nash Draw #8 Federal

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS10	S	10-15-18 09:30	1.5 ft	602722-001
SS11	S	10-15-18 09:35	1.5 ft	602722-002
SS12	S	10-15-18 09:45	1.5 ft	602722-003
SS13	S	10-15-18 09:55	1.5 ft	602722-004
SS14	S	10-15-18 10:05	1.5 ft	602722-005
SS15	S	10-15-18 10:20	1.5 ft	602722-006
SW03	S	10-15-18 09:10	1 ft	602722-007
SW04	S	10-15-18 09:20	1 ft	602722-008
SW05	S	10-15-18 10:45	1 ft	602722-009
SW06	S	10-15-18 11:35	1 ft	602722-010



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Nash Draw #8 Federal

Project ID: 012918153
Work Order Number(s): 602722

Report Date: 23-OCT-18
Date Received: 10/18/2018

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3067041 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



Certificate of Analysis Summary 602722

LT Environmental, Inc., Arvada, CO

Project Name: Nash Draw #8 Federal



Project Id: 012918153
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Thu Oct-18-18 10:40 am
Report Date: 23-OCT-18
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	602722-001	602722-002	602722-003	602722-004	602722-005	602722-006
	<i>Field Id:</i>	SS10	SS11	SS12	SS13	SS14	SS15
	<i>Depth:</i>	1.5- ft	1.5- ft	1.5- ft	1.5- ft	1.5- ft	1.5- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Oct-15-18 09:30	Oct-15-18 09:35	Oct-15-18 09:45	Oct-15-18 09:55	Oct-15-18 10:05	Oct-15-18 10:20
BTEX by EPA 8021B SUB: T104704219-18-18	<i>Extracted:</i>	Oct-19-18 12:30	Oct-19-18 12:30	Oct-19-18 12:30	Oct-19-18 12:30	Oct-19-18 12:30	Oct-19-18 12:30
	<i>Analyzed:</i>	Oct-21-18 15:03	Oct-21-18 16:16	Oct-21-18 16:40	Oct-21-18 17:04	Oct-21-18 17:29	Oct-21-18 17:53
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.0197 0.0197	<0.0196 0.0196	<0.0189 0.0189	<0.0199 0.0199	<0.0193 0.0193	<0.0170 0.0170
Toluene		<0.0197 0.0197	<0.0196 0.0196	<0.0189 0.0189	<0.0199 0.0199	<0.0193 0.0193	<0.0170 0.0170
Ethylbenzene		0.0276 0.0197	<0.0196 0.0196	<0.0189 0.0189	<0.0199 0.0199	<0.0193 0.0193	<0.0170 0.0170
m,p-Xylenes		0.103 0.0394	<0.0392 0.0392	<0.0379 0.0379	<0.0398 0.0398	<0.0386 0.0386	<0.0340 0.0340
o-Xylene		<0.0197 0.0197	<0.0196 0.0196	<0.0189 0.0189	<0.0199 0.0199	<0.0193 0.0193	<0.0170 0.0170
Total Xylenes		0.103 0.0197	<0.0196 0.0196	<0.0189 0.0189	<0.0199 0.0199	<0.0193 0.0193	<0.0170 0.0170
Total BTEX		0.131 0.0197	<0.0196 0.0196	<0.0189 0.0189	<0.0199 0.0199	<0.0193 0.0193	<0.0170 0.0170
Inorganic Anions by EPA 300 SUB: T104704219-18-18	<i>Extracted:</i>	Oct-19-18 11:00	Oct-19-18 11:00	Oct-19-18 11:00	Oct-19-18 11:00	Oct-19-18 11:00	Oct-19-18 11:00
	<i>Analyzed:</i>	Oct-20-18 00:10	Oct-20-18 00:22	Oct-20-18 00:35	Oct-20-18 00:47	Oct-20-18 01:00	Oct-20-18 01:12
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		292 125	279 125	491 125	199 125	46.1 25.0	255 25.0
TPH by SW8015 Mod	<i>Extracted:</i>	Oct-19-18 16:00	Oct-19-18 16:00	Oct-19-18 16:00	Oct-19-18 16:00	Oct-19-18 16:00	Oct-19-18 16:00
	<i>Analyzed:</i>	Oct-19-18 19:50	Oct-19-18 20:54	Oct-19-18 21:16	Oct-19-18 21:37	Oct-19-18 21:58	Oct-19-18 22:19
	<i>Units/RL:</i>	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	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Diesel Range Organics (DRO)		<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Total TPH		<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0

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Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 602722

LT Environmental, Inc., Arvada, CO

Project Name: Nash Draw #8 Federal



Project Id: 012918153
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Thu Oct-18-18 10:40 am
Report Date: 23-OCT-18
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	602722-007	602722-008	602722-009	602722-010		
	<i>Field Id:</i>	SW03	SW04	SW05	SW06		
	<i>Depth:</i>	1- ft	1- ft	1- ft	1- ft		
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL		
	<i>Sampled:</i>	Oct-15-18 09:10	Oct-15-18 09:20	Oct-15-18 10:45	Oct-15-18 11:35		
BTEX by EPA 8021B SUB: T104704219-18-18	<i>Extracted:</i>	Oct-19-18 12:30	Oct-19-18 12:30	Oct-19-18 12:30	Oct-19-18 12:30		
	<i>Analyzed:</i>	Oct-21-18 18:18	Oct-21-18 18:42	Oct-21-18 08:17	Oct-21-18 19:06		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Benzene		<0.0190 0.0190	<0.0193 0.0193	<0.0177 0.0177	<0.0195 0.0195		
Toluene		<0.0190 0.0190	<0.0193 0.0193	<0.0177 0.0177	<0.0195 0.0195		
Ethylbenzene		<0.0190 0.0190	<0.0193 0.0193	<0.0177 0.0177	<0.0195 0.0195		
m,p-Xylenes		<0.0380 0.0380	<0.0386 0.0386	<0.0353 0.0353	<0.0390 0.0390		
o-Xylene		<0.0190 0.0190	<0.0193 0.0193	<0.0177 0.0177	<0.0195 0.0195		
Total Xylenes		<0.0190 0.0190	<0.0193 0.0193	<0.0177 0.0177	<0.0195 0.0195		
Total BTEX		<0.0190 0.0190	<0.0193 0.0193	<0.0177 0.0177	<0.0195 0.0195		
Inorganic Anions by EPA 300 SUB: T104704219-18-18	<i>Extracted:</i>	Oct-19-18 11:00	Oct-19-18 10:30	Oct-19-18 10:30	Oct-19-18 10:30		
	<i>Analyzed:</i>	Oct-20-18 01:24	Oct-22-18 12:45	Oct-22-18 13:34	Oct-22-18 13:47		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Chloride		157 25.0	329 25.0	97.4 25.0	165 25.0		
TPH by SW8015 Mod	<i>Extracted:</i>	Oct-19-18 16:00	Oct-19-18 16:00	Oct-19-18 16:00	Oct-19-18 16:00		
	<i>Analyzed:</i>	Oct-19-18 22:40	Oct-19-18 23:01	Oct-19-18 23:22	Oct-19-18 23:43		
	<i>Units/RL:</i>	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		
Diesel Range Organics (DRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9		
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9		
Total TPH		<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9		

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The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.
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Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analytical Results 602722

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **SS10**
 Lab Sample Id: 602722-001

Matrix: Soil
 Date Collected: 10.15.18 09.30

Date Received: 10.18.18 10.40
 Sample Depth: 1.5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: RNL

Analyst: RNL

Seq Number: 3067032

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	292	125	mg/kg	10.20.18 00.10		5

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3067092

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.19.18 19.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.19.18 19.50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.19.18 19.50	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.19.18 19.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	10.19.18 19.50	
o-Terphenyl	84-15-1	99	%	70-135	10.19.18 19.50	



Certificate of Analytical Results 602722

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **SS10**
 Lab Sample Id: 602722-001

Matrix: Soil
 Date Collected: 10.15.18 09.30

Date Received: 10.18.18 10.40
 Sample Depth: 1.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 10.19.18 12.30

Basis: Wet Weight

Seq Number: 3067041

SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0197	0.0197	mg/kg	10.21.18 15.03	U	1
Toluene	108-88-3	<0.0197	0.0197	mg/kg	10.21.18 15.03	U	1
Ethylbenzene	100-41-4	0.0276	0.0197	mg/kg	10.21.18 15.03		1
m,p-Xylenes	179601-23-1	0.103	0.0394	mg/kg	10.21.18 15.03		1
o-Xylene	95-47-6	<0.0197	0.0197	mg/kg	10.21.18 15.03	U	1
Total Xylenes	1330-20-7	0.103	0.0197	mg/kg	10.21.18 15.03		1
Total BTEX		0.131	0.0197	mg/kg	10.21.18 15.03		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	119	%	68-120	10.21.18 15.03		
a,a,a-Trifluorotoluene	98-08-8	106	%	71-121	10.21.18 15.03		



Certificate of Analytical Results 602722

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **SS11** Matrix: **Soil** Date Received: 10.18.18 10.40
 Lab Sample Id: 602722-002 Date Collected: 10.15.18 09.35 Sample Depth: 1.5 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: **RNL** % Moisture:
 Analyst: **RNL** Date Prep: 10.19.18 11.00 Basis: **Wet Weight**
 Seq Number: 3067032 SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	279	125	mg/kg	10.20.18 00.22		5

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: **ARM** % Moisture:
 Analyst: **ARM** Date Prep: 10.19.18 16.00 Basis: **Wet Weight**
 Seq Number: 3067092

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	10.19.18 20.54	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	10.19.18 20.54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	10.19.18 20.54	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	10.19.18 20.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	10.19.18 20.54	
o-Terphenyl	84-15-1	99	%	70-135	10.19.18 20.54	



Certificate of Analytical Results 602722

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **SS11**
 Lab Sample Id: 602722-002

Matrix: Soil
 Date Collected: 10.15.18 09.35

Date Received: 10.18.18 10.40
 Sample Depth: 1.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 10.19.18 12.30

Basis: Wet Weight

Seq Number: 3067041

SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0196	0.0196	mg/kg	10.21.18 16.16	U	1
Toluene	108-88-3	<0.0196	0.0196	mg/kg	10.21.18 16.16	U	1
Ethylbenzene	100-41-4	<0.0196	0.0196	mg/kg	10.21.18 16.16	U	1
m,p-Xylenes	179601-23-1	<0.0392	0.0392	mg/kg	10.21.18 16.16	U	1
o-Xylene	95-47-6	<0.0196	0.0196	mg/kg	10.21.18 16.16	U	1
Total Xylenes	1330-20-7	<0.0196	0.0196	mg/kg	10.21.18 16.16	U	1
Total BTEX		<0.0196	0.0196	mg/kg	10.21.18 16.16	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	90	%	68-120	10.21.18 16.16		
a,a,a-Trifluorotoluene	98-08-8	94	%	71-121	10.21.18 16.16		



Certificate of Analytical Results 602722

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: SS12 Matrix: Soil Date Received: 10.18.18 10.40
 Lab Sample Id: 602722-003 Date Collected: 10.15.18 09.45 Sample Depth: 1.5 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: RNL % Moisture:
 Analyst: RNL Date Prep: 10.19.18 11.00 Basis: Wet Weight
 Seq Number: 3067032 SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	491	125	mg/kg	10.20.18 00.35		5

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 10.19.18 16.00 Basis: Wet Weight
 Seq Number: 3067092

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.19.18 21.16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.19.18 21.16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.19.18 21.16	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.19.18 21.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	10.19.18 21.16	
o-Terphenyl	84-15-1	99	%	70-135	10.19.18 21.16	



Certificate of Analytical Results 602722

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: SS12
 Lab Sample Id: 602722-003

Matrix: Soil
 Date Collected: 10.15.18 09.45

Date Received: 10.18.18 10.40
 Sample Depth: 1.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 10.19.18 12.30

Basis: Wet Weight

Seq Number: 3067041

SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0189	0.0189	mg/kg	10.21.18 16.40	U	1
Toluene	108-88-3	<0.0189	0.0189	mg/kg	10.21.18 16.40	U	1
Ethylbenzene	100-41-4	<0.0189	0.0189	mg/kg	10.21.18 16.40	U	1
m,p-Xylenes	179601-23-1	<0.0379	0.0379	mg/kg	10.21.18 16.40	U	1
o-Xylene	95-47-6	<0.0189	0.0189	mg/kg	10.21.18 16.40	U	1
Total Xylenes	1330-20-7	<0.0189	0.0189	mg/kg	10.21.18 16.40	U	1
Total BTEX		<0.0189	0.0189	mg/kg	10.21.18 16.40	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	104	%	68-120	10.21.18 16.40		
a,a,a-Trifluorotoluene	98-08-8	107	%	71-121	10.21.18 16.40		



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LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: SS13
Lab Sample Id: 602722-004

Matrix: Soil
Date Collected: 10.15.18 09.55

Date Received: 10.18.18 10.40
Sample Depth: 1.5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: RNL

Analyst: RNL

Seq Number: 3067032

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	199	125	mg/kg	10.20.18 00.47		5

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3067092

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.19.18 21.37	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.19.18 21.37	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.19.18 21.37	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.19.18 21.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	10.19.18 21.37	
o-Terphenyl	84-15-1	97	%	70-135	10.19.18 21.37	



Certificate of Analytical Results 602722

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: SS13
Lab Sample Id: 602722-004

Matrix: Soil
Date Collected: 10.15.18 09.55

Date Received: 10.18.18 10.40
Sample Depth: 1.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MIT

Analyst: MIT

Seq Number: 3067041

Prep Method: SW5030B

% Moisture:

Date Prep: 10.19.18 12.30

Basis: Wet Weight

SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0199	0.0199	mg/kg	10.21.18 17.04	U	1
Toluene	108-88-3	<0.0199	0.0199	mg/kg	10.21.18 17.04	U	1
Ethylbenzene	100-41-4	<0.0199	0.0199	mg/kg	10.21.18 17.04	U	1
m,p-Xylenes	179601-23-1	<0.0398	0.0398	mg/kg	10.21.18 17.04	U	1
o-Xylene	95-47-6	<0.0199	0.0199	mg/kg	10.21.18 17.04	U	1
Total Xylenes	1330-20-7	<0.0199	0.0199	mg/kg	10.21.18 17.04	U	1
Total BTEX		<0.0199	0.0199	mg/kg	10.21.18 17.04	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	89	%	68-120	10.21.18 17.04		
a,a,a-Trifluorotoluene	98-08-8	87	%	71-121	10.21.18 17.04		



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LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **SS14**
 Lab Sample Id: 602722-005

Matrix: Soil
 Date Collected: 10.15.18 10.05

Date Received: 10.18.18 10.40
 Sample Depth: 1.5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: RNL

Analyst: RNL

Seq Number: 3067032

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	46.1	25.0	mg/kg	10.20.18 01.00		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3067092

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.19.18 21.58	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.19.18 21.58	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.19.18 21.58	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.19.18 21.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	10.19.18 21.58	
o-Terphenyl	84-15-1	94	%	70-135	10.19.18 21.58	



Certificate of Analytical Results 602722

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **SS14**
 Lab Sample Id: 602722-005

Matrix: Soil
 Date Collected: 10.15.18 10.05

Date Received: 10.18.18 10.40
 Sample Depth: 1.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MIT

Analyst: MIT

Seq Number: 3067041

Prep Method: SW5030B

% Moisture:

Date Prep: 10.19.18 12.30

Basis: Wet Weight

SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0193	0.0193	mg/kg	10.21.18 17.29	U	1
Toluene	108-88-3	<0.0193	0.0193	mg/kg	10.21.18 17.29	U	1
Ethylbenzene	100-41-4	<0.0193	0.0193	mg/kg	10.21.18 17.29	U	1
m,p-Xylenes	179601-23-1	<0.0386	0.0386	mg/kg	10.21.18 17.29	U	1
o-Xylene	95-47-6	<0.0193	0.0193	mg/kg	10.21.18 17.29	U	1
Total Xylenes	1330-20-7	<0.0193	0.0193	mg/kg	10.21.18 17.29	U	1
Total BTEX		<0.0193	0.0193	mg/kg	10.21.18 17.29	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	100	%	68-120	10.21.18 17.29		
a,a,a-Trifluorotoluene	98-08-8	97	%	71-121	10.21.18 17.29		



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LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: SS15
Lab Sample Id: 602722-006

Matrix: Soil
Date Collected: 10.15.18 10.20

Date Received: 10.18.18 10.40
Sample Depth: 1.5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: RNL

Analyst: RNL

Seq Number: 3067032

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	255	25.0	mg/kg	10.20.18 01.12		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3067092

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.19.18 22.19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.19.18 22.19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.19.18 22.19	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.19.18 22.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	10.19.18 22.19	
o-Terphenyl	84-15-1	97	%	70-135	10.19.18 22.19	



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LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: SS15
 Lab Sample Id: 602722-006

Matrix: Soil
 Date Collected: 10.15.18 10.20

Date Received: 10.18.18 10.40
 Sample Depth: 1.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 10.19.18 12.30

Basis: Wet Weight

Seq Number: 3067041

SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0170	0.0170	mg/kg	10.21.18 17.53	U	1
Toluene	108-88-3	<0.0170	0.0170	mg/kg	10.21.18 17.53	U	1
Ethylbenzene	100-41-4	<0.0170	0.0170	mg/kg	10.21.18 17.53	U	1
m,p-Xylenes	179601-23-1	<0.0340	0.0340	mg/kg	10.21.18 17.53	U	1
o-Xylene	95-47-6	<0.0170	0.0170	mg/kg	10.21.18 17.53	U	1
Total Xylenes	1330-20-7	<0.0170	0.0170	mg/kg	10.21.18 17.53	U	1
Total BTEX		<0.0170	0.0170	mg/kg	10.21.18 17.53	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	76	%	68-120	10.21.18 17.53		
a,a,a-Trifluorotoluene	98-08-8	80	%	71-121	10.21.18 17.53		



Certificate of Analytical Results 602722

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **SW03**
 Lab Sample Id: 602722-007

Matrix: Soil
 Date Collected: 10.15.18 09.10

Date Received: 10.18.18 10.40
 Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: RNL

Analyst: RNL

Seq Number: 3067032

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	157	25.0	mg/kg	10.20.18 01.24		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3067092

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.19.18 22.40	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.19.18 22.40	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.19.18 22.40	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.19.18 22.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	10.19.18 22.40	
o-Terphenyl	84-15-1	97	%	70-135	10.19.18 22.40	



Certificate of Analytical Results 602722

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **SW03**
 Lab Sample Id: 602722-007

Matrix: Soil
 Date Collected: 10.15.18 09.10

Date Received: 10.18.18 10.40
 Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 10.19.18 12.30

Basis: Wet Weight

Seq Number: 3067041

SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0190	0.0190	mg/kg	10.21.18 18.18	U	1
Toluene	108-88-3	<0.0190	0.0190	mg/kg	10.21.18 18.18	U	1
Ethylbenzene	100-41-4	<0.0190	0.0190	mg/kg	10.21.18 18.18	U	1
m,p-Xylenes	179601-23-1	<0.0380	0.0380	mg/kg	10.21.18 18.18	U	1
o-Xylene	95-47-6	<0.0190	0.0190	mg/kg	10.21.18 18.18	U	1
Total Xylenes	1330-20-7	<0.0190	0.0190	mg/kg	10.21.18 18.18	U	1
Total BTEX		<0.0190	0.0190	mg/kg	10.21.18 18.18	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	100	%	68-120	10.21.18 18.18		
a,a,a-Trifluorotoluene	98-08-8	104	%	71-121	10.21.18 18.18		



Certificate of Analytical Results 602722



LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **SW04**
Lab Sample Id: 602722-008

Matrix: Soil
Date Collected: 10.15.18 09.20

Date Received: 10.18.18 10.40
Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: RNL

Analyst: RNL

Seq Number: 3067146

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	329	25.0	mg/kg	10.22.18 12.45		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3067092

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.19.18 23.01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.19.18 23.01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.19.18 23.01	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.19.18 23.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	10.19.18 23.01	
o-Terphenyl	84-15-1	99	%	70-135	10.19.18 23.01	



Certificate of Analytical Results 602722



LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **SW04**
Lab Sample Id: 602722-008

Matrix: Soil
Date Collected: 10.15.18 09.20

Date Received: 10.18.18 10.40
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 10.19.18 12.30

Basis: Wet Weight

Seq Number: 3067041

SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0193	0.0193	mg/kg	10.21.18 18.42	U	1
Toluene	108-88-3	<0.0193	0.0193	mg/kg	10.21.18 18.42	U	1
Ethylbenzene	100-41-4	<0.0193	0.0193	mg/kg	10.21.18 18.42	U	1
m,p-Xylenes	179601-23-1	<0.0386	0.0386	mg/kg	10.21.18 18.42	U	1
o-Xylene	95-47-6	<0.0193	0.0193	mg/kg	10.21.18 18.42	U	1
Total Xylenes	1330-20-7	<0.0193	0.0193	mg/kg	10.21.18 18.42	U	1
Total BTEX		<0.0193	0.0193	mg/kg	10.21.18 18.42	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	80	%	68-120	10.21.18 18.42		
a,a,a-Trifluorotoluene	98-08-8	78	%	71-121	10.21.18 18.42		



Certificate of Analytical Results 602722



LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **SW05**
Lab Sample Id: 602722-009

Matrix: Soil
Date Collected: 10.15.18 10.45

Date Received: 10.18.18 10.40
Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: RNL

Analyst: RNL

Seq Number: 3067146

Date Prep: 10.19.18 10.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	97.4	25.0	mg/kg	10.22.18 13.34		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3067092

Date Prep: 10.19.18 16.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.19.18 23.22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.19.18 23.22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.19.18 23.22	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.19.18 23.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	10.19.18 23.22	
o-Terphenyl	84-15-1	99	%	70-135	10.19.18 23.22	



Certificate of Analytical Results 602722



LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **SW05**
Lab Sample Id: 602722-009

Matrix: Soil
Date Collected: 10.15.18 10.45

Date Received: 10.18.18 10.40
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 10.19.18 12.30

Basis: Wet Weight

Seq Number: 3067041

SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0177	0.0177	mg/kg	10.21.18 08.17	U	1
Toluene	108-88-3	<0.0177	0.0177	mg/kg	10.21.18 08.17	U	1
Ethylbenzene	100-41-4	<0.0177	0.0177	mg/kg	10.21.18 08.17	U	1
m,p-Xylenes	179601-23-1	<0.0353	0.0353	mg/kg	10.21.18 08.17	U	1
o-Xylene	95-47-6	<0.0177	0.0177	mg/kg	10.21.18 08.17	U	1
Total Xylenes	1330-20-7	<0.0177	0.0177	mg/kg	10.21.18 08.17	U	1
Total BTEX		<0.0177	0.0177	mg/kg	10.21.18 08.17	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	110	%	68-120	10.21.18 08.17		
a,a,a-Trifluorotoluene	98-08-8	110	%	71-121	10.21.18 08.17		



Certificate of Analytical Results 602722



LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **SW06**
Lab Sample Id: 602722-010

Matrix: Soil
Date Collected: 10.15.18 11.35

Date Received: 10.18.18 10.40
Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: RNL

Analyst: RNL

Seq Number: 3067146

Date Prep: 10.19.18 10.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	165	25.0	mg/kg	10.22.18 13.47		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3067092

Date Prep: 10.19.18 16.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	10.19.18 23.43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	10.19.18 23.43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	10.19.18 23.43	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	10.19.18 23.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	10.19.18 23.43	
o-Terphenyl	84-15-1	99	%	70-135	10.19.18 23.43	



Certificate of Analytical Results 602722



LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **SW06**
Lab Sample Id: 602722-010

Matrix: Soil
Date Collected: 10.15.18 11.35

Date Received: 10.18.18 10.40
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 10.19.18 12.30

Basis: Wet Weight

Seq Number: 3067041

SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0195	0.0195	mg/kg	10.21.18 19.06	U	1
Toluene	108-88-3	<0.0195	0.0195	mg/kg	10.21.18 19.06	U	1
Ethylbenzene	100-41-4	<0.0195	0.0195	mg/kg	10.21.18 19.06	U	1
m,p-Xylenes	179601-23-1	<0.0390	0.0390	mg/kg	10.21.18 19.06	U	1
o-Xylene	95-47-6	<0.0195	0.0195	mg/kg	10.21.18 19.06	U	1
Total Xylenes	1330-20-7	<0.0195	0.0195	mg/kg	10.21.18 19.06	U	1
Total BTEX		<0.0195	0.0195	mg/kg	10.21.18 19.06	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	83	%	68-120	10.21.18 19.06		
a,a,a-Trifluorotoluene	98-08-8	84	%	71-121	10.21.18 19.06		



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



LT Environmental, Inc.

Nash Draw #8 Federal

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3067146

MB Sample Id: 7664617-1-BLK

Matrix: Solid

LCS Sample Id: 7664617-1-BKS

Prep Method: E300P

Date Prep: 10.19.18

LCSD Sample Id: 7664617-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.572	250	242	97	236	94	90-110	3	20	mg/kg	10.22.18 12:20	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3067032

MB Sample Id: 7664555-1-BLK

Matrix: Solid

LCS Sample Id: 7664555-1-BKS

Prep Method: E300P

Date Prep: 10.19.18

LCSD Sample Id: 7664555-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.572	250	240	96	244	98	90-110	2	20	mg/kg	10.19.18 22:43	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3067146

Parent Sample Id: 602722-008

Matrix: Soil

MS Sample Id: 602722-008 S

Prep Method: E300P

Date Prep: 10.19.18

MSD Sample Id: 602722-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	329	250	594	106	561	93	80-120	6	20	mg/kg	10.22.18 13:10	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3067032

Parent Sample Id: 602721-006

Matrix: Soil

MS Sample Id: 602721-006 S

Prep Method: E300P

Date Prep: 10.19.18

MSD Sample Id: 602721-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	4.84	250	250	98	247	97	80-120	1	20	mg/kg	10.19.18 23:45	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3067092

MB Sample Id: 7664522-1-BLK

Matrix: Solid

LCS Sample Id: 7664522-1-BKS

Prep Method: TX1005P

Date Prep: 10.19.18

LCSD Sample Id: 7664522-1-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)	8.13	1000	932	93	947	95	70-135	2	20	mg/kg	10.19.18 09:21	
Diesel Range Organics (DRO)	<8.13	1000	932	93	948	95	70-135	2	20	mg/kg	10.19.18 09:21	

Surrogate

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	93		126		127		70-135	%	10.19.18 09:21
o-Terphenyl	98		103		103		70-135	%	10.19.18 09:21

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 $\text{Log Diff.} = \text{Log}(\text{Sample Duplicate}) - \text{Log}(\text{Original Sample})$

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



LT Environmental, Inc.

Nash Draw #8 Federal

Analytical Method: TPH by SW8015 Mod

Seq Number: 3067092

Parent Sample Id: 602722-001

Matrix: Soil

MS Sample Id: 602722-001 S

Prep Method: TX1005P

Date Prep: 10.19.18

MSD Sample Id: 602722-001 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)	14.2	999	918	90	941	93	70-135	2	20	mg/kg	10.19.18 20:12	
Diesel Range Organics (DRO)	<8.12	999	918	92	940	94	70-135	2	20	mg/kg	10.19.18 20:12	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	123		126		70-135	%	10.19.18 20:12
o-Terphenyl	103		99		70-135	%	10.19.18 20:12

Analytical Method: BTEX by EPA 8021B

Seq Number: 3067041

MB Sample Id: 7664512-1-BLK

Matrix: Solid

LCS Sample Id: 7664512-1-BKS

Prep Method: SW5030B

Date Prep: 10.19.18

LCSD Sample Id: 7664512-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.0200	2.00	1.80	90	1.82	91	55-120	1	20	mg/kg	10.21.18 06:41	
Toluene	<0.0200	2.00	1.76	88	1.78	89	77-120	1	20	mg/kg	10.21.18 06:41	
Ethylbenzene	<0.0200	2.00	1.83	92	1.85	93	77-120	1	20	mg/kg	10.21.18 06:41	
m,p-Xylenes	<0.0400	4.00	3.66	92	3.70	93	78-120	1	20	mg/kg	10.21.18 06:41	
o-Xylene	<0.0200	2.00	1.85	93	1.87	94	78-120	1	20	mg/kg	10.21.18 06:41	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	76		86		84		68-120	%	10.21.18 06:41
a,a,a-Trifluorotoluene	75		89		85		71-121	%	10.21.18 06:41

Analytical Method: BTEX by EPA 8021B

Seq Number: 3067041

Parent Sample Id: 602722-009

Matrix: Soil

MS Sample Id: 602722-009 S

Prep Method: SW5030B

Date Prep: 10.19.18

MSD Sample Id: 602722-009 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.0191	1.91	1.64	86	1.48	83	54-120	10	25	mg/kg	10.21.18 08:41	
Toluene	<0.0191	1.91	1.75	92	1.50	84	57-120	15	25	mg/kg	10.21.18 08:41	
Ethylbenzene	<0.0191	1.91	1.92	101	1.58	89	58-131	19	25	mg/kg	10.21.18 08:41	
m,p-Xylenes	<0.0382	3.82	3.83	100	3.16	89	62-124	19	25	mg/kg	10.21.18 08:41	
o-Xylene	<0.0191	1.91	1.86	97	1.57	88	62-124	17	25	mg/kg	10.21.18 08:41	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	113		89		68-120	%	10.21.18 08:41
a,a,a-Trifluorotoluene	109		91		71-121	%	10.21.18 08:41

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C-A) / B$
 $RPD = 200 * |(C-E) / (C+E)|$
 $[D] = 100 * (C) / [B]$
 $\text{Log Diff.} = \text{Log}(\text{Sample Duplicate}) - \text{Log}(\text{Original Sample})$

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

Work Order No:

1602722

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 (505-392-7550) Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (813-620-2000)

www.xenco.com Page 1 of 1

Project Manager:	Adrian Baker	Bill to: (if different)	Kyle Little
Company Name:	LT Environmental	Company Name:	XTO
Address:	3300 41st Street, Building 1, #103	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	
Phone:	(432) 704-5178	Email:	Abaker@LTenv.com

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

Project Name:	Wash. Draw #8 Federal	Turn Around	
Project Number:	012918153	Routine	☒
P.O. Number:	2PR-5007	Rush:	
Sampler's Name:	Fabian Lucbari	Due Date:	

SAMPLE RECEIPT Temp Blank: ☒ Yes ☒ No Wet Ice: ☒ Yes ☒ No Temperature (°C): 30 Thermometer ID: 100 Received Inact: ☒ Yes ☒ No Cooler Custody Seals: Yes ☒ No ☒ N/A Correction Factor: 0.00 Sample Custody Seals: Yes ☒ No ☒ N/A Total Containers: 0.00	
ANALYSIS REQUEST	
Number of Containers BTEX (only BTEX) TPH (DRO) (GRO) (MRO) Chlorides (300.00)	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth																
SS10	S	10/15/18	0930	1.5'	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
SS11	S	10/15/18	0935	1.5'	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
SS12	S	10/15/18	0945	1.5'	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
SS13	S	10/15/18	0955	1.5'	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
SS14	S	10/15/18	1005	1.5'	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
SS15	S	10/15/18	1020	1.5'	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
SW03	S	10/15/18	0910	1'	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
SW04	S	10/15/18	0920	1'	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
SW05	S	10/15/18	1045	1'	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
SW06	S	10/15/18	1135	1'	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

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 Ti 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 Ti U	1631 / 245.1 / 7470 / 7471 : Hg	

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Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 <i>[Signature]</i>	1 <i>[Signature]</i>	10/16/18 11:12	2 <i>[Signature]</i>	2 <i>[Signature]</i>	10/19/18 10:40
3			4		
5			6		

ORIGIN ID:CAOA (575) 887-6245 XENCO PAC N MAIL 910 W PIERCE ST CARLSBAD, NM 88220 UNITED STATES US	SHIP DATE: 17OCT18 ACT WGT: 56.00 LB CAD: 101813/06/INET 4040 DIMS: 26x14x14 IN BILL RECIPIENT
TO HOLD FOR XENCO FEDEX EXPRESS SHIP CENTER FEDEX SHIP CENTER 3600 COUNTY RD 1276 S MIDLAND TX 79711 (806) 794-1296 REF: INV: PO: DEPT:	

552J1.88FB/DCA5



J182118081501ur

TRK# 7735 0392 4628

0201

41 MAFA

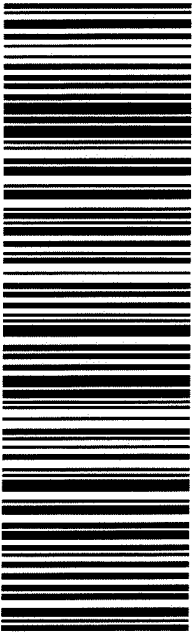
TX-US LBB

THU - 18 OCT HOLD

STANDARD OVERNIGHT

HLD

MAFA



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Inter-Office Shipment

IOS Number **115724**

Date/Time: 10/18/18 11:24

Created by: Brianna Teel

Please send report to: Jessica Kramer

Lab# From: **Midland**

Delivery Priority:

Address: 1211 W. Florida Ave, Midland TX 79701

Lab# To: **Lubbock**

Air Bill No.: 773515268264

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
602722-001	S	SS10	10/15/18 09:30	E300	Inorganic Anions by EPA 300	10/24/18	11/12/18	JKR	CL	
602722-001	S	SS10	10/15/18 09:30	SW8021B	BTEX by EPA 8021B	10/24/18	10/29/18	JKR	BR4FBZ BZ BZME EBZ X	
602722-002	S	SS11	10/15/18 09:35	E300	Inorganic Anions by EPA 300	10/24/18	11/12/18	JKR	CL	
602722-002	S	SS11	10/15/18 09:35	SW8021B	BTEX by EPA 8021B	10/24/18	10/29/18	JKR	BR4FBZ BZ BZME EBZ X	
602722-003	S	SS12	10/15/18 09:45	E300	Inorganic Anions by EPA 300	10/24/18	11/12/18	JKR	CL	
602722-003	S	SS12	10/15/18 09:45	SW8021B	BTEX by EPA 8021B	10/24/18	10/29/18	JKR	BR4FBZ BZ BZME EBZ X	
602722-004	S	SS13	10/15/18 09:55	E300	Inorganic Anions by EPA 300	10/24/18	11/12/18	JKR	CL	
602722-004	S	SS13	10/15/18 09:55	SW8021B	BTEX by EPA 8021B	10/24/18	10/29/18	JKR	BR4FBZ BZ BZME EBZ X	
602722-005	S	SS14	10/15/18 10:05	E300	Inorganic Anions by EPA 300	10/24/18	11/12/18	JKR	CL	
602722-005	S	SS14	10/15/18 10:05	SW8021B	BTEX by EPA 8021B	10/24/18	10/29/18	JKR	BR4FBZ BZ BZME EBZ X	
602722-006	S	SS15	10/15/18 10:20	E300	Inorganic Anions by EPA 300	10/24/18	11/12/18	JKR	CL	
602722-006	S	SS15	10/15/18 10:20	SW8021B	BTEX by EPA 8021B	10/24/18	10/29/18	JKR	BR4FBZ BZ BZME EBZ X	
602722-007	S	SW03	10/15/18 09:10	E300	Inorganic Anions by EPA 300	10/24/18	11/12/18	JKR	CL	
602722-007	S	SW03	10/15/18 09:10	SW8021B	BTEX by EPA 8021B	10/24/18	10/29/18	JKR	BR4FBZ BZ BZME EBZ X	
602722-008	S	SW04	10/15/18 09:20	E300	Inorganic Anions by EPA 300	10/24/18	11/12/18	JKR	CL	
602722-008	S	SW04	10/15/18 09:20	SW8021B	BTEX by EPA 8021B	10/24/18	10/29/18	JKR	BR4FBZ BZ BZME EBZ X	
602722-009	S	SW05	10/15/18 10:45	E300	Inorganic Anions by EPA 300	10/24/18	11/12/18	JKR	CL	
602722-009	S	SW05	10/15/18 10:45	SW8021B	BTEX by EPA 8021B	10/24/18	10/29/18	JKR	BR4FBZ BZ BZME EBZ X	
602722-010	S	SW06	10/15/18 11:35	SW8021B	BTEX by EPA 8021B	10/24/18	10/29/18	JKR	BR4FBZ BZ BZME EBZ X	
602722-010	S	SW06	10/15/18 11:35	E300	Inorganic Anions by EPA 300	10/24/18	11/12/18	JKR	CL	



Inter-Office Shipment

Page 2 of 2

IOS Number 115724

Date/Time: 10/18/18 11:24

Created by: Brianna Teel

Please send report to: Jessica Kramer

Lab# From: **Midland**

Delivery Priority:

Address: 1211 W. Florida Ave, Midland TX 79701

Lab# To: **Lubbock**

Air Bill No.: 773515268264

E-Mail: jessica.kramer@xenco.com

Inter Office Shipment or Sample Comments:

Relinquished By:

Brianna Teel

Brianna Teel

Received By:

Brenda Ward

Brenda Ward

Date Relinquished: 10/18/2018

Date Received: 10/19/2018 10:44

Cooler Temperature: 2.9



Inter Office Report- Sample Receipt Checklist

Sent To: Lubbock

IOS #: 115724

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : IR-3

Sent By: Brianna Teel

Date Sent: 10/18/2018 11:24 AM

Received By: Brenda Ward

Date Received: 10/19/2018 10:44 AM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	2.9	
#2 *Shipping container in good condition?	Yes	0
#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?	No	
#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:

Brenda Ward

Date: 10/19/2018



Client: LT Environmental, Inc.

Date/ Time Received: 10/18/2018 10:40:00 AM

Work Order #: 602722

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)?	3.2	
#2 *Shipping container in good condition?	Yes	
#3 *Samples received on ice?	Yes	
#4 *Custody Seals intact on shipping container/ cooler?	N/A	
#5 Custody Seals intact on sample bottles?	N/A	
#6 *Custody Seals Signed and dated?	N/A	
#7 *Chain of Custody present?	Yes	
#8 Any missing/extra samples?	No	
#9 Chain of Custody signed when relinquished/ received?	Yes	
#10 Chain of Custody agrees with sample labels/matrix?	Yes	
#11 Container label(s) legible and intact?	Yes	
#12 Samples in proper container/ bottle?	Yes	
#13 Samples properly preserved?	Yes	
#14 Sample container(s) intact?	Yes	
#15 Sufficient sample amount for indicated test(s)?	Yes	
#16 All samples received within hold time?	Yes	
#17 Subcontract of sample(s)?	Yes	Lubbock-BTEX/Chlorides
#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: 10/18/2018

Checklist reviewed by:

Jessica Kramer

Date: 10/18/2018

Analytical Report 602878

for
LT Environmental, Inc.

Project Manager: Adrian Baker

Nash Draw # 8 Federal

012918153

25-OCT-18

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-18-28), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (T104704295-18-17), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)

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-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)

Xenco-Atlanta (LELAP Lab ID #04176)

Xenco-Tampa: Florida (E87429)

Xenco-Lakeland: Florida (E84098)



25-OCT-18

Project Manager: **Adrian Baker**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **602878**

Nash Draw # 8 Federal

Project Address: Delaware Basin

Adrian Baker:

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) 602878. 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. 602878 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,

A handwritten signature in black ink that reads '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 602878****LT Environmental, Inc., Arvada, CO**

Nash Draw # 8 Federal

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS16	S	10-16-18 11:55	6 In	602878-001
SS17	S	10-16-18 12:00	6 In	602878-002
SS18	S	10-16-18 13:00	6 In	602878-003
SS19	S	10-16-18 13:10	6 In	602878-004
SS20	S	10-16-18 11:40	6 In	602878-005
SS21	S	10-16-18 11:50	6 In	602878-006
SS22	S	10-16-18 12:40	6 In	602878-007
SS23	S	10-16-18 12:50	6 In	602878-008
SW07	S	10-16-18 13:30	4 In	602878-009
SW08	S	10-16-18 13:40	4 In	602878-010
SW09	S	10-16-18 13:50	4 In	602878-011
SW10	S	10-16-18 13:55	4 In	602878-012

**CASE NARRATIVE****Client Name: LT Environmental, Inc.****Project Name: Nash Draw # 8 Federal**Project ID: 012918153
Work Order Number(s): 602878Report Date: 25-OCT-18
Date Received: 10/19/2018

Sample receipt non conformances and comments:None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3067203 BTEX by EPA 8021B

Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 602878-001 S.

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Lab Sample ID 602878-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD).

Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike.

Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 602878-001, -003, -005, -007, -009.

The Laboratory Control Sample for Toluene, Benzene, m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3067379 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



Certificate of Analysis Summary 602878

LT Environmental, Inc., Arvada, CO

Project Name: Nash Draw # 8 Federal

Project Id: 012918153
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Fri Oct-19-18 10:30 am
Report Date: 25-OCT-18
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	602878-001	602878-002	602878-003	602878-004	602878-005	602878-006
	<i>Field Id:</i>	SS16	SS17	SS18	SS19	SS20	SS21
	<i>Depth:</i>	6- In	6- In	6- In	6- In	6- In	6- In
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Oct-16-18 11:55	Oct-16-18 12:00	Oct-16-18 13:00	Oct-16-18 13:10	Oct-16-18 11:40	Oct-16-18 11:50
BTEX by EPA 8021B	<i>Extracted:</i>	Oct-22-18 08:00	Oct-23-18 08:00	Oct-22-18 08:00	Oct-23-18 08:00	Oct-22-18 08:00	Oct-23-18 08:00
	<i>Analyzed:</i>	Oct-22-18 12:48	Oct-23-18 21:55	Oct-22-18 17:58	Oct-23-18 22:17	Oct-22-18 18:42	Oct-23-18 22:39
	<i>Units/RL:</i>	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	<0.00199 0.00199	<0.00201 0.00201
Toluene		<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199	<0.00201 0.00201
Ethylbenzene		<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199	<0.00201 0.00201
m,p-Xylenes		<0.00398 0.00398	<0.00398 0.00398	<0.00402 0.00402	<0.00401 0.00401	<0.00398 0.00398	<0.00402 0.00402
o-Xylene		<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199	<0.00201 0.00201
Total Xylenes		<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199	<0.00201 0.00201
Total BTEX		<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199	<0.00201 0.00201
Inorganic Anions by EPA 300	<i>Extracted:</i>	Oct-23-18 17:28	Oct-23-18 17:28	Oct-23-18 17:28	Oct-23-18 17:28	Oct-23-18 17:28	Oct-23-18 17:28
	<i>Analyzed:</i>	Oct-24-18 10:41	Oct-24-18 10:46	Oct-24-18 10:51	Oct-24-18 10:57	Oct-24-18 11:13	Oct-24-18 11:18
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		65.5 4.96	112 4.99	281 4.95	364 4.97	214 4.96	271 4.96
TPH by SW8015 Mod	<i>Extracted:</i>	Oct-22-18 10:00	Oct-22-18 10:00	Oct-22-18 10:00	Oct-22-18 10:00	Oct-22-18 10:00	Oct-22-18 10:00
	<i>Analyzed:</i>	Oct-22-18 12:16	Oct-22-18 13:17	Oct-22-18 13:38	Oct-22-18 13:58	Oct-22-18 14:19	Oct-22-18 14:40
	<i>Units/RL:</i>	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	<14.9 14.9	<15.0 15.0
Diesel Range Organics (DRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0
Total TPH		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0

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

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 602878

LT Environmental, Inc., Arvada, CO

Project Name: Nash Draw # 8 Federal

Project Id: 012918153
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Fri Oct-19-18 10:30 am
Report Date: 25-OCT-18
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	602878-007	602878-008	602878-009	602878-010	602878-011	602878-012
	<i>Field Id:</i>	SS22	SS23	SW07	SW08	SW09	SW10
	<i>Depth:</i>	6- In	6- In	4- In	4- In	4- In	4- In
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Oct-16-18 12:40	Oct-16-18 12:50	Oct-16-18 13:30	Oct-16-18 13:40	Oct-16-18 13:50	Oct-16-18 13:55
BTEX by EPA 8021B	<i>Extracted:</i>	Oct-22-18 08:00	Oct-23-18 08:00	Oct-22-18 08:00	Oct-23-18 08:00	Oct-23-18 08:00	Oct-23-18 08:00
	<i>Analyzed:</i>	Oct-22-18 19:26	Oct-23-18 23:00	Oct-22-18 20:09	Oct-23-18 23:21	Oct-23-18 16:15	Oct-23-18 16:36
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198	<0.00202 0.00202	<0.00201 0.00201
Toluene		<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198	<0.00202 0.00202	<0.00201 0.00201
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198	<0.00202 0.00202	<0.00201 0.00201
m,p-Xylenes		<0.00401 0.00401	<0.00399 0.00399	<0.00398 0.00398	<0.00397 0.00397	<0.00403 0.00403	<0.00402 0.00402
o-Xylene		<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198	<0.00202 0.00202	<0.00201 0.00201
Total Xylenes		<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198	<0.00202 0.00202	<0.00201 0.00201
Total BTEX		<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198	<0.00202 0.00202	<0.00201 0.00201
Inorganic Anions by EPA 300	<i>Extracted:</i>	Oct-23-18 17:28	Oct-23-18 17:28	Oct-23-18 17:28	Oct-23-18 17:28	Oct-23-18 17:28	Oct-23-18 17:28
	<i>Analyzed:</i>	Oct-24-18 11:23	Oct-24-18 11:28	Oct-24-18 11:34	Oct-24-18 11:39	Oct-24-18 11:55	Oct-24-18 12:00
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		223 5.00	236 5.00	202 4.97	157 4.97	614 4.99	194 4.96
TPH by SW8015 Mod	<i>Extracted:</i>	Oct-22-18 10:00	Oct-22-18 10:00	Oct-19-18 16:00	Oct-19-18 16:00	Oct-19-18 16:00	Oct-19-18 16:00
	<i>Analyzed:</i>	Oct-22-18 15:01	Oct-22-18 15:21	Oct-21-18 03:25	Oct-21-18 03:46	Oct-21-18 04:06	Oct-21-18 04:27
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Diesel Range Organics (DRO)		<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Motor Oil Range Hydrocarbons (MRO)		<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Total TPH		<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0

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Jessica Kramer
Project Assistant



Certificate of Analytical Results 602878



LT Environmental, Inc., Arvada, CO

Nash Draw # 8 Federal

Sample Id: **SS16**
Lab Sample Id: 602878-001

Matrix: Soil
Date Collected: 10.16.18 11.55

Date Received: 10.19.18 10.30
Sample Depth: 6 In

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3067376

Date Prep: 10.23.18 17.28

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	65.5	4.96	mg/kg	10.24.18 10.41		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3067248

Date Prep: 10.22.18 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.22.18 12.16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.22.18 12.16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.22.18 12.16	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.22.18 12.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	10.22.18 12.16	
o-Terphenyl	84-15-1	96	%	70-135	10.22.18 12.16	



Certificate of Analytical Results 602878



LT Environmental, Inc., Arvada, CO

Nash Draw # 8 Federal

Sample Id: **SS16**
Lab Sample Id: 602878-001

Matrix: Soil
Date Collected: 10.16.18 11.55

Date Received: 10.19.18 10.30
Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 10.22.18 08.00

Basis: Wet Weight

Seq Number: 3067203

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	10.22.18 12.48	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	10.22.18 12.48	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	10.22.18 12.48	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	10.22.18 12.48	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	10.22.18 12.48	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	10.22.18 12.48	U	1
Total BTEX		<0.00199	0.00199	mg/kg	10.22.18 12.48	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	114	%	70-130	10.22.18 12.48		
4-Bromofluorobenzene	460-00-4	129	%	70-130	10.22.18 12.48		



Certificate of Analytical Results 602878

LT Environmental, Inc., Arvada, CO

Nash Draw # 8 Federal

Sample Id: SS17
Lab Sample Id: 602878-002

Matrix: Soil
Date Collected: 10.16.18 12.00

Date Received: 10.19.18 10.30
Sample Depth: 6 In

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3067376

Date Prep: 10.23.18 17.28

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	112	4.99	mg/kg	10.24.18 10.46		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3067248

Date Prep: 10.22.18 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.22.18 13.17	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.22.18 13.17	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.22.18 13.17	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.22.18 13.17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	10.22.18 13.17	
o-Terphenyl	84-15-1	88	%	70-135	10.22.18 13.17	



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LT Environmental, Inc., Arvada, CO

Nash Draw # 8 Federal

Sample Id: SS17
 Lab Sample Id: 602878-002

Matrix: Soil
 Date Collected: 10.16.18 12.00

Date Received: 10.19.18 10.30
 Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 10.23.18 08.00

Basis: Wet Weight

Seq Number: 3067379

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	10.23.18 21.55	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	10.23.18 21.55	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	10.23.18 21.55	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	10.23.18 21.55	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	10.23.18 21.55	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	10.23.18 21.55	U	1
Total BTEX		<0.00199	0.00199	mg/kg	10.23.18 21.55	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	114	%	70-130	10.23.18 21.55		
1,4-Difluorobenzene	540-36-3	112	%	70-130	10.23.18 21.55		



Certificate of Analytical Results 602878



LT Environmental, Inc., Arvada, CO

Nash Draw # 8 Federal

Sample Id: **SS18**
Lab Sample Id: 602878-003

Matrix: Soil
Date Collected: 10.16.18 13.00

Date Received: 10.19.18 10.30
Sample Depth: 6 In

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3067376

Date Prep: 10.23.18 17.28

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	281	4.95	mg/kg	10.24.18 10.51		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3067248

Date Prep: 10.22.18 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.22.18 13.38	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.22.18 13.38	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.22.18 13.38	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.22.18 13.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	10.22.18 13.38	
o-Terphenyl	84-15-1	85	%	70-135	10.22.18 13.38	



Certificate of Analytical Results 602878



LT Environmental, Inc., Arvada, CO

Nash Draw # 8 Federal

Sample Id: **SS18**
Lab Sample Id: 602878-003

Matrix: Soil
Date Collected: 10.16.18 13.00

Date Received: 10.19.18 10.30
Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 10.22.18 08.00

Basis: Wet Weight

Seq Number: 3067203

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	10.22.18 17.58	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	10.22.18 17.58	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	10.22.18 17.58	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	10.22.18 17.58	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	10.22.18 17.58	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	10.22.18 17.58	U	1
Total BTEX		<0.00201	0.00201	mg/kg	10.22.18 17.58	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	119	%	70-130	10.22.18 17.58		
4-Bromofluorobenzene	460-00-4	128	%	70-130	10.22.18 17.58		



Certificate of Analytical Results 602878



LT Environmental, Inc., Arvada, CO

Nash Draw # 8 Federal

Sample Id: **SS19**
Lab Sample Id: 602878-004

Matrix: Soil
Date Collected: 10.16.18 13.10

Date Received: 10.19.18 10.30
Sample Depth: 6 In

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3067376

Date Prep: 10.23.18 17.28

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	364	4.97	mg/kg	10.24.18 10.57		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3067248

Date Prep: 10.22.18 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.22.18 13.58	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.22.18 13.58	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.22.18 13.58	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.22.18 13.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	10.22.18 13.58	
o-Terphenyl	84-15-1	95	%	70-135	10.22.18 13.58	



Certificate of Analytical Results 602878



LT Environmental, Inc., Arvada, CO

Nash Draw # 8 Federal

Sample Id: **SS19**
Lab Sample Id: 602878-004

Matrix: Soil
Date Collected: 10.16.18 13.10

Date Received: 10.19.18 10.30
Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 10.23.18 08.00

Basis: Wet Weight

Seq Number: 3067379

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.23.18 22.17	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.23.18 22.17	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.23.18 22.17	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	10.23.18 22.17	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.23.18 22.17	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.23.18 22.17	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.23.18 22.17	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	117	%	70-130	10.23.18 22.17		
1,4-Difluorobenzene	540-36-3	106	%	70-130	10.23.18 22.17		



Certificate of Analytical Results 602878

LT Environmental, Inc., Arvada, CO

Nash Draw # 8 Federal

Sample Id: **SS20** Matrix: Soil Date Received: 10.19.18 10.30
 Lab Sample Id: 602878-005 Date Collected: 10.16.18 11.40 Sample Depth: 6 In
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 10.23.18 17.28 Basis: Wet Weight
 Seq Number: 3067376

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	214	4.96	mg/kg	10.24.18 11.13		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 10.22.18 10.00 Basis: Wet Weight
 Seq Number: 3067248

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	10.22.18 14.19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	10.22.18 14.19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	10.22.18 14.19	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	10.22.18 14.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	10.22.18 14.19	
o-Terphenyl	84-15-1	92	%	70-135	10.22.18 14.19	



Certificate of Analytical Results 602878

LT Environmental, Inc., Arvada, CO

Nash Draw # 8 Federal

Sample Id: SS20
Lab Sample Id: 602878-005

Matrix: Soil
Date Collected: 10.16.18 11.40

Date Received: 10.19.18 10.30
Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Tech: ALJ

Analyst: ALJ

Seq Number: 3067203

Date Prep: 10.22.18 08.00

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	10.22.18 18.42	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	10.22.18 18.42	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	10.22.18 18.42	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	10.22.18 18.42	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	10.22.18 18.42	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	10.22.18 18.42	U	1
Total BTEX		<0.00199	0.00199	mg/kg	10.22.18 18.42	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	130	%	70-130	10.22.18 18.42		
1,4-Difluorobenzene	540-36-3	116	%	70-130	10.22.18 18.42		



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LT Environmental, Inc., Arvada, CO

Nash Draw # 8 Federal

Sample Id: SS21
Lab Sample Id: 602878-006

Matrix: Soil
Date Collected: 10.16.18 11.50

Date Received: 10.19.18 10.30
Sample Depth: 6 In

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3067376

Date Prep: 10.23.18 17.28

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	271	4.96	mg/kg	10.24.18 11.18		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3067248

Date Prep: 10.22.18 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.22.18 14.40	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.22.18 14.40	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.22.18 14.40	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.22.18 14.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	10.22.18 14.40	
o-Terphenyl	84-15-1	89	%	70-135	10.22.18 14.40	



Certificate of Analytical Results 602878



LT Environmental, Inc., Arvada, CO

Nash Draw # 8 Federal

Sample Id: SS21
Lab Sample Id: 602878-006

Matrix: Soil
Date Collected: 10.16.18 11.50

Date Received: 10.19.18 10.30
Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 10.23.18 08.00

Basis: Wet Weight

Seq Number: 3067379

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	10.23.18 22.39	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	10.23.18 22.39	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	10.23.18 22.39	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	10.23.18 22.39	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	10.23.18 22.39	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	10.23.18 22.39	U	1
Total BTEX		<0.00201	0.00201	mg/kg	10.23.18 22.39	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	115	%	70-130	10.23.18 22.39		
1,4-Difluorobenzene	540-36-3	112	%	70-130	10.23.18 22.39		



Certificate of Analytical Results 602878

LT Environmental, Inc., Arvada, CO

Nash Draw # 8 Federal

Sample Id: SS22 Matrix: Soil Date Received: 10.19.18 10.30
 Lab Sample Id: 602878-007 Date Collected: 10.16.18 12.40 Sample Depth: 6 In
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 10.23.18 17.28 Basis: Wet Weight
 Seq Number: 3067376

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	223	5.00	mg/kg	10.24.18 11.23		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 10.22.18 10.00 Basis: Wet Weight
 Seq Number: 3067248

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	10.22.18 15.01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	10.22.18 15.01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	10.22.18 15.01	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	10.22.18 15.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	10.22.18 15.01	
o-Terphenyl	84-15-1	96	%	70-135	10.22.18 15.01	



Certificate of Analytical Results 602878

LT Environmental, Inc., Arvada, CO

Nash Draw # 8 Federal

Sample Id: SS22
Lab Sample Id: 602878-007

Matrix: Soil
Date Collected: 10.16.18 12.40

Date Received: 10.19.18 10.30
Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 10.22.18 08.00

Basis: Wet Weight

Seq Number: 3067203

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.22.18 19.26	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.22.18 19.26	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.22.18 19.26	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	10.22.18 19.26	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.22.18 19.26	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.22.18 19.26	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.22.18 19.26	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	126	%	70-130	10.22.18 19.26		
1,4-Difluorobenzene	540-36-3	111	%	70-130	10.22.18 19.26		



Certificate of Analytical Results 602878

LT Environmental, Inc., Arvada, CO

Nash Draw # 8 Federal

Sample Id: SS23 Matrix: Soil Date Received: 10.19.18 10.30
 Lab Sample Id: 602878-008 Date Collected: 10.16.18 12.50 Sample Depth: 6 In
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 10.23.18 17.28 Basis: Wet Weight
 Seq Number: 3067376

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	236	5.00	mg/kg	10.24.18 11.28		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 10.22.18 10.00 Basis: Wet Weight
 Seq Number: 3067248

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.22.18 15.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.22.18 15.21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.22.18 15.21	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.22.18 15.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	84	%	70-135	10.22.18 15.21	
o-Terphenyl	84-15-1	85	%	70-135	10.22.18 15.21	



Certificate of Analytical Results 602878

LT Environmental, Inc., Arvada, CO

Nash Draw # 8 Federal

Sample Id: SS23
 Lab Sample Id: 602878-008

Matrix: Soil
 Date Collected: 10.16.18 12.50

Date Received: 10.19.18 10.30
 Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Tech: ALJ

Analyst: ALJ

Seq Number: 3067379

Date Prep: 10.23.18 08.00

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	10.23.18 23.00	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.23.18 23.00	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.23.18 23.00	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	10.23.18 23.00	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.23.18 23.00	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.23.18 23.00	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.23.18 23.00	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	115	%	70-130	10.23.18 23.00		
1,4-Difluorobenzene	540-36-3	108	%	70-130	10.23.18 23.00		



Certificate of Analytical Results 602878



LT Environmental, Inc., Arvada, CO

Nash Draw # 8 Federal

Sample Id: **SW07**
Lab Sample Id: 602878-009

Matrix: Soil
Date Collected: 10.16.18 13.30

Date Received: 10.19.18 10.30
Sample Depth: 4 In

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3067376

Date Prep: 10.23.18 17.28

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	202	4.97	mg/kg	10.24.18 11.34		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3067103

Date Prep: 10.19.18 16.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.21.18 03.25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.21.18 03.25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.21.18 03.25	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.21.18 03.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	10.21.18 03.25	
o-Terphenyl	84-15-1	96	%	70-135	10.21.18 03.25	



Certificate of Analytical Results 602878

LT Environmental, Inc., Arvada, CO

Nash Draw # 8 Federal

Sample Id: **SW07**
 Lab Sample Id: 602878-009

Matrix: Soil
 Date Collected: 10.16.18 13.30

Date Received: 10.19.18 10.30
 Sample Depth: 4 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 10.22.18 08.00

Basis: Wet Weight

Seq Number: 3067203

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	10.22.18 20.09	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	10.22.18 20.09	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	10.22.18 20.09	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	10.22.18 20.09	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	10.22.18 20.09	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	10.22.18 20.09	U	1
Total BTEX		<0.00199	0.00199	mg/kg	10.22.18 20.09	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	129	%	70-130	10.22.18 20.09		
1,4-Difluorobenzene	540-36-3	112	%	70-130	10.22.18 20.09		



Certificate of Analytical Results 602878

LT Environmental, Inc., Arvada, CO

Nash Draw # 8 Federal

Sample Id: **SW08**
 Lab Sample Id: 602878-010

Matrix: Soil
 Date Collected: 10.16.18 13.40

Date Received: 10.19.18 10.30
 Sample Depth: 4 In

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3067376

Date Prep: 10.23.18 17.28

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	157	4.97	mg/kg	10.24.18 11.39		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3067103

Date Prep: 10.19.18 16.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.21.18 03.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.21.18 03.46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.21.18 03.46	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.21.18 03.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	10.21.18 03.46	
o-Terphenyl	84-15-1	95	%	70-135	10.21.18 03.46	



Certificate of Analytical Results 602878

LT Environmental, Inc., Arvada, CO

Nash Draw # 8 Federal

Sample Id: **SW08**
 Lab Sample Id: 602878-010

Matrix: Soil
 Date Collected: 10.16.18 13.40

Date Received: 10.19.18 10.30
 Sample Depth: 4 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 10.23.18 08.00

Basis: Wet Weight

Seq Number: 3067379

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	10.23.18 23.21	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	10.23.18 23.21	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	10.23.18 23.21	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	10.23.18 23.21	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	10.23.18 23.21	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	10.23.18 23.21	U	1
Total BTEX		<0.00198	0.00198	mg/kg	10.23.18 23.21	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	113	%	70-130	10.23.18 23.21		
1,4-Difluorobenzene	540-36-3	118	%	70-130	10.23.18 23.21		



Certificate of Analytical Results 602878

LT Environmental, Inc., Arvada, CO

Nash Draw # 8 Federal

Sample Id: **SW09**
 Lab Sample Id: 602878-011

Matrix: Soil
 Date Collected: 10.16.18 13.50

Date Received: 10.19.18 10.30
 Sample Depth: 4 In

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3067376

Date Prep: 10.23.18 17.28

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	614	4.99	mg/kg	10.24.18 11.55		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3067103

Date Prep: 10.19.18 16.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.21.18 04.06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.21.18 04.06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.21.18 04.06	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.21.18 04.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	10.21.18 04.06	
o-Terphenyl	84-15-1	92	%	70-135	10.21.18 04.06	



Certificate of Analytical Results 602878



LT Environmental, Inc., Arvada, CO

Nash Draw # 8 Federal

Sample Id: **SW09**
Lab Sample Id: 602878-011

Matrix: Soil
Date Collected: 10.16.18 13.50

Date Received: 10.19.18 10.30
Sample Depth: 4 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 10.23.18 08.00

Basis: Wet Weight

Seq Number: 3067379

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	10.23.18 16.15	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	10.23.18 16.15	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	10.23.18 16.15	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	10.23.18 16.15	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	10.23.18 16.15	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	10.23.18 16.15	U	1
Total BTEX		<0.00202	0.00202	mg/kg	10.23.18 16.15	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	127	%	70-130	10.23.18 16.15		
1,4-Difluorobenzene	540-36-3	124	%	70-130	10.23.18 16.15		



Certificate of Analytical Results 602878

LT Environmental, Inc., Arvada, CO

Nash Draw # 8 Federal

Sample Id: **SW10**
 Lab Sample Id: 602878-012

Matrix: Soil
 Date Collected: 10.16.18 13.55

Date Received: 10.19.18 10.30
 Sample Depth: 4 In

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3067376

Date Prep: 10.23.18 17.28

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	194	4.96	mg/kg	10.24.18 12.00		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3067103

Date Prep: 10.19.18 16.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.21.18 04.27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.21.18 04.27	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.21.18 04.27	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.21.18 04.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	10.21.18 04.27	
o-Terphenyl	84-15-1	84	%	70-135	10.21.18 04.27	



Certificate of Analytical Results 602878



LT Environmental, Inc., Arvada, CO

Nash Draw # 8 Federal

Sample Id: **SW10**
Lab Sample Id: 602878-012

Matrix: Soil
Date Collected: 10.16.18 13.55

Date Received: 10.19.18 10.30
Sample Depth: 4 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 10.23.18 08.00

Basis: Wet Weight

Seq Number: 3067379

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	10.23.18 16.36	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	10.23.18 16.36	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	10.23.18 16.36	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	10.23.18 16.36	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	10.23.18 16.36	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	10.23.18 16.36	U	1
Total BTEX		<0.00201	0.00201	mg/kg	10.23.18 16.36	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	108	%	70-130	10.23.18 16.36		
4-Bromofluorobenzene	460-00-4	103	%	70-130	10.23.18 16.36		



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



LT Environmental, Inc.

Nash Draw # 8 Federal

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3067376

MB Sample Id: 7664702-1-BLK

Matrix: Solid

LCS Sample Id: 7664702-1-BKS

Prep Method: E300P

Date Prep: 10.23.18

LCSD Sample Id: 7664702-1-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	266	106	265	106	90-110	0	20	mg/kg	10.24.18 10:14	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3067376

Parent Sample Id: 602655-001

Matrix: Soil

MS Sample Id: 602655-001 S

Prep Method: E300P

Date Prep: 10.23.18

MSD Sample Id: 602655-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.852	248	258	104	262	106	90-110	2	20	mg/kg	10.24.18 10:30	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3067376

Parent Sample Id: 602878-010

Matrix: Soil

MS Sample Id: 602878-010 S

Prep Method: E300P

Date Prep: 10.23.18

MSD Sample Id: 602878-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	157	249	416	104	416	104	90-110	0	20	mg/kg	10.24.18 11:44	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3067103

MB Sample Id: 7664527-1-BLK

Matrix: Solid

LCS Sample Id: 7664527-1-BKS

Prep Method: TX1005P

Date Prep: 10.19.18

LCSD Sample Id: 7664527-1-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	1000	100	974	97	70-135	3	20	mg/kg	10.20.18 19:52	
Diesel Range Organics (DRO)	<8.13	1000	1030	103	999	100	70-135	3	20	mg/kg	10.20.18 19:52	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	91		125		124		70-135	%	10.20.18 19:52
o-Terphenyl	100		106		107		70-135	%	10.20.18 19:52

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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



LT Environmental, Inc.

Nash Draw # 8 Federal

Analytical Method: TPH by SW8015 Mod

Seq Number: 3067248

MB Sample Id: 7664678-1-BLK

Matrix: Solid

LCS Sample Id: 7664678-1-BKS

Prep Method: TX1005P

Date Prep: 10.22.18

LCSD Sample Id: 7664678-1-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	946	95	977	98	70-135	3	20	mg/kg	10.22.18 11:35	
Diesel Range Organics (DRO)	<8.13	1000	957	96	1010	101	70-135	5	20	mg/kg	10.22.18 11:35	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date			
1-Chlorooctane	98		128		117		70-135	%	10.22.18 11:35			
o-Terphenyl	104		105		109		70-135	%	10.22.18 11:35			

Analytical Method: TPH by SW8015 Mod

Seq Number: 3067103

Parent Sample Id: 602870-030

Matrix: Soil

MS Sample Id: 602870-030 S

Prep Method: TX1005P

Date Prep: 10.19.18

MSD Sample Id: 602870-030 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	941	94	955	96	70-135	1	20	mg/kg	10.20.18 20:54	
Diesel Range Organics (DRO)	<8.10	997	979	98	1010	101	70-135	3	20	mg/kg	10.20.18 20:54	
Surrogate			MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date			
1-Chlorooctane			125		121		70-135	%	10.20.18 20:54			
o-Terphenyl			109		104		70-135	%	10.20.18 20:54			

Analytical Method: TPH by SW8015 Mod

Seq Number: 3067248

Parent Sample Id: 602878-001

Matrix: Soil

MS Sample Id: 602878-001 S

Prep Method: TX1005P

Date Prep: 10.22.18

MSD Sample Id: 602878-001 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)	<7.99	999	927	93	942	94	70-135	2	20	mg/kg	10.22.18 12:36	
Diesel Range Organics (DRO)	<8.12	999	988	99	1010	101	70-135	2	20	mg/kg	10.22.18 12:36	
Surrogate			MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date			
1-Chlorooctane			123		124		70-135	%	10.22.18 12:36			
o-Terphenyl			99		94		70-135	%	10.22.18 12:36			

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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



LT Environmental, Inc.

Nash Draw # 8 Federal

Analytical Method: BTEX by EPA 8021B

Seq Number: 3067203

MB Sample Id: 7664671-1-BLK

Matrix: Solid

LCS Sample Id: 7664671-1-BKS

Prep Method: SW5030B

Date Prep: 10.22.18

LCSD Sample Id: 7664671-1-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	0.0868	87	0.0739	73	70-130	16	35	mg/kg	10.22.18 10:40	
Toluene	<0.00200	0.100	0.0762	76	0.0720	71	70-130	6	35	mg/kg	10.22.18 10:40	
Ethylbenzene	<0.00200	0.100	0.0904	90	0.0731	72	70-130	21	35	mg/kg	10.22.18 10:40	
m,p-Xylenes	<0.00401	0.200	0.184	92	0.150	74	70-130	20	35	mg/kg	10.22.18 10:40	
o-Xylene	<0.00200	0.100	0.0829	83	0.0710	70	70-130	15	35	mg/kg	10.22.18 10:40	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	111		106		112		70-130	%	10.22.18 10:40
4-Bromofluorobenzene	104		125		130		70-130	%	10.22.18 10:40

Analytical Method: BTEX by EPA 8021B

Seq Number: 3067379

MB Sample Id: 7664750-1-BLK

Matrix: Solid

LCS Sample Id: 7664750-1-BKS

Prep Method: SW5030B

Date Prep: 10.23.18

LCSD Sample Id: 7664750-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.114	114	0.123	123	70-130	8	35	mg/kg	10.23.18 13:43	
Toluene	<0.00199	0.0996	0.0969	97	0.107	107	70-130	10	35	mg/kg	10.23.18 13:43	
Ethylbenzene	<0.00199	0.0996	0.116	116	0.128	128	70-130	10	35	mg/kg	10.23.18 13:43	
m,p-Xylenes	<0.00101	0.199	0.232	117	0.254	127	70-130	9	35	mg/kg	10.23.18 13:43	
o-Xylene	<0.00199	0.0996	0.109	109	0.119	119	70-130	9	35	mg/kg	10.23.18 13:43	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	113		103		111		70-130	%	10.23.18 13:43
4-Bromofluorobenzene	108		115		113		70-130	%	10.23.18 13:43

Analytical Method: BTEX by EPA 8021B

Seq Number: 3067379

Parent Sample Id: 602878-011

Matrix: Soil

MS Sample Id: 602878-011 S

Prep Method: SW5030B

Date Prep: 10.23.18

MSD Sample Id: 602878-011 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	0.0994	0.0945	95	0.0881	88	70-130	7	35	mg/kg	10.23.18 14:26	
Toluene	<0.00199	0.0994	0.0769	77	0.0739	74	70-130	4	35	mg/kg	10.23.18 14:26	
Ethylbenzene	<0.00199	0.0994	0.0904	91	0.0822	82	70-130	10	35	mg/kg	10.23.18 14:26	
m,p-Xylenes	<0.00398	0.199	0.187	94	0.170	85	70-130	10	35	mg/kg	10.23.18 14:26	
o-Xylene	<0.00199	0.0994	0.0925	93	0.0841	84	70-130	10	35	mg/kg	10.23.18 14:26	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		91		70-130	%	10.23.18 14:26
4-Bromofluorobenzene	120		104		70-130	%	10.23.18 14:26

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* |(C-E) / (C+E)|
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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



LT Environmental, Inc.

Nash Draw # 8 Federal

Analytical Method: BTEX by EPA 8021B

Seq Number: 3067203

Parent Sample Id: 602878-001

Matrix: Soil

MS Sample Id: 602878-001 S

Prep Method: SW5030B

Date Prep: 10.22.18

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.0621	61	70-130	mg/kg	10.22.18 11:23	X
Toluene	<0.00202	0.101	0.0602	60	70-130	mg/kg	10.22.18 11:23	X
Ethylbenzene	<0.00202	0.101	0.0648	64	70-130	mg/kg	10.22.18 11:23	X
m,p-Xylenes	<0.00403	0.202	0.140	69	70-130	mg/kg	10.22.18 11:23	X
o-Xylene	<0.00202	0.101	0.0701	69	70-130	mg/kg	10.22.18 11:23	X

Surrogate	MS %Rec	MS Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	113		70-130	%	10.22.18 11:23
4-Bromofluorobenzene	153		70-130	%	10.22.18 11:23

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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



Chain of Custody

Work Order No:

102878

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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Page 1 of 2

Project Manager:	Arten Baker	Bill to: (if different)	Kyle Little
Company Name:	LT Environmental	Company Name:	XTO
Address:	3300 141 street, Building 1, #103	Address:	
City, State ZIP:	Midland TX 79705	City, State ZIP:	
Phone:	(432) 764-5178	Email:	ABaker@LTEnv.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:	012A18153	Turn Around	
Project Number:	Asht Drive #8 Federal	Routine	☒
P.O. Number:	2 EP-5007	Rush:	
Sampler's Name:	Fabian Wilson	Due Date:	

SAMPLE RECEIPT	Temp Blank:	Yes ☐ No ☒	Wet Ice:	Yes ☐ No ☒
Temperature (°C):	1.3	Thermometer ID		
Received In tact:	Yes ☒ No ☐	Correction Factor:		
Cooler Custody Seals:	Yes ☐ No ☒ N/A	Total Containers:		
Sample Custody Seals:	Yes ☐ No ☒ N/A			

ANALYSIS REQUEST		Work Order Notes	
Number of Containers		TAT starts the day received by the lab, if received by 4:30pm	
BTEX (only BTEX)			
TPH (GRO) (DRO) (MRO)			
Chlorides (300.00)			

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth																	Sample Comments
SS16	S	10/10/18	1155	6"	1	X	X	X	X												Composite Sample
SS17	S	10/10/18	1200	6"	1	X	X	X	X												
SS18	S	10/10/18	1300	6"	1	X	X	X	X												
SS19	S	10/10/18	1310	6"	1	X	X	X	X												
SS20	S	10/10/18	1140	6"	1	X	X	X	X												
SS21	S	10/10/18	1150	6"	1	X	X	X	X												
SS22	S	10/10/18	1240	6"	1	X	X	X	X												
SS23	S	10/10/18	1250	6"	1	X	X	X	X												
SS27	S	10/10/18	1330	4"	1	X	X	X	X												
SS28	S	10/10/18	1340	4"	1	X	X	X	X												

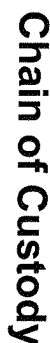
Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SIO2 Na Sr Ti Sn U V Zn
 Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U 1631 / 245.1 / 7470 / 7471 : Hg

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1. <i>[Signature]</i>	<i>[Signature]</i>	10/17/18 1723	2. <i>[Signature]</i>	<i>[Signature]</i>	10/19/18 10:30
3. <i>[Signature]</i>	<i>[Signature]</i>				
5. <i>[Signature]</i>	<i>[Signature]</i>				

Tracking #: 7735 1510 0650

Revised Date 05/14/18 Rev. 2018.1



Work Order No: 602878

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0380 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) 291-1111

www.xenco.com Page 0

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:	

[illegible]

	TAT starts the day received by the lab, if received by 4:30pm
EX (only BTE)	
(GRO) (DRO)	
orders (300.	

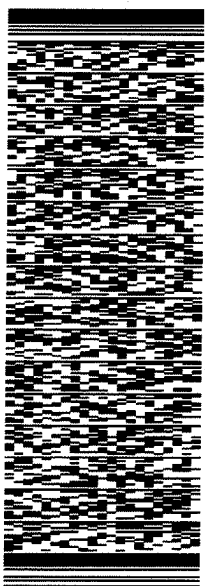
[illegible][illegible]

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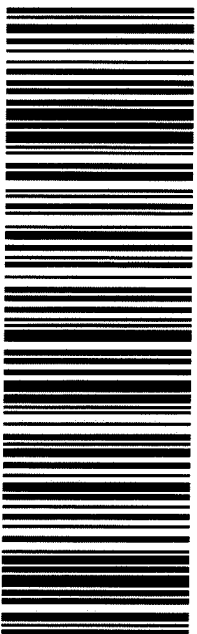
Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		10/17/18 1723			10/19/18 1630

Tracking #: 77351516065

Revised Date 051418 Rev. 2018.

ORIGIN ID:CAOA (5/5) 887-6245 XENCO PAC N MAIL 910 W PIERCE ST CARLSBAD, NM 88220 UNITED STATES US		SHIP DATE: 18OCT18 ACTWGT: 25.00 LB CAD: 10183706NET4040 DIMS: 18x12x15 IN BILL RECIPIENT
TO HOLD FOR XENCO FEDEX EXPRESS SHIP CENTER FEDEX SHIP CENTER 3600 COUNTY RD 1276 S MIDLAND TX 79711 (800) 794-1296 REF:		
PO: DEPT:		
		
		
J182118881501ur		
552J1188FB/DCA5		

TRK# 7735 1516 0650 0201	FRI - 19 OCT HOLD STANDARD OVERNIGHT HLD MAFA TX-US LBB
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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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Client: LT Environmental, Inc.

Date/ Time Received: 10/19/2018 10:30:00 AM

Work Order #: 602878

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)?	1.3
#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)?	No
#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:

Katie Lowe

Date: 10/19/2018

Checklist reviewed by:

Jessica Kramer

Date: 10/21/2018

Analytical Report 602982

for
LT Environmental, Inc.

Project Manager: Adrian Baker

Nash Draw #8 Federal

012918153

26-OCT-18

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-18-28), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (T104704295-18-17), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)

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-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)

Xenco-Atlanta (LELAP Lab ID #04176)

Xenco-Tampa: Florida (E87429)

Xenco-Lakeland: Florida (E84098)



26-OCT-18

Project Manager: **Adrian Baker**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **602982**

Nash Draw #8 Federal

Project Address: Delaware Basin

Adrian Baker:

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) 602982. 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. 602982 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,

A handwritten signature in black ink that reads '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 602982****LT Environmental, Inc., Arvada, CO**

Nash Draw #8 Federal

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS24	S	10-18-18 09:10	6 In	602982-001
SS25	S	10-18-18 09:15	6 In	602982-002
SS26	S	10-18-18 09:20	6 In	602982-003
SS27	S	10-18-18 09:25	6 In	602982-004
SS28	S	10-18-18 09:30	6 In	602982-005
SS29	S	10-18-18 09:45	6 In	602982-006
SS30	S	10-18-18 09:50	6 In	602982-007
SS31	S	10-18-18 09:55	6 In	602982-008
SS32	S	10-18-18 09:35	6 In	602982-009
SS33	S	10-18-18 10:00	6 In	602982-010
SS34	S	10-18-18 10:05	6 In	602982-011
SS35	S	10-18-18 10:10	6 In	602982-012
SS36	S	10-18-18 10:15	6 In	602982-013
SW11	S	10-18-18 10:50	4 In	602982-014
SW12	S	10-18-18 11:00	4 In	602982-015



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Nash Draw #8 Federal

Project ID: 012918153
Work Order Number(s): 602982

Report Date: 26-OCT-18
Date Received: 10/20/2018

Sample receipt non conformances and comments:

PER CLIENTS EMAIL REQUEST, CORRECTE PROJECT NAME TO READ Nash Draw #8 Federal.
10/26/18 JKR NEW VERSION GENERATED

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3067329 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Surrogate 4-Bromofluorobenzene, Surrogate a,a,a-Trifluorotoluene recovered below QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 602980-001 SD.

Batch: LBA-3067556 BTEX by EPA 8021B

Surrogate 4-Bromofluorobenzene recovered below QC limits Data confirmed by re-analysis. Samples affected are: 7664798-1-BSD.

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



Certificate of Analysis Summary 602982

LT Environmental, Inc., Arvada, CO

Project Name: Nash Draw #8 Federal

Project Id: 012918153
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Sat Oct-20-18 09:00 am
Report Date: 26-OCT-18
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	602982-001	602982-002	602982-003	602982-004	602982-005	602982-006
	<i>Field Id:</i>	SS24	SS25	SS26	SS27	SS28	SS29
	<i>Depth:</i>	6- In	6- In	6- In	6- In	6- In	6- In
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Oct-18-18 09:10	Oct-18-18 09:15	Oct-18-18 09:20	Oct-18-18 09:25	Oct-18-18 09:30	Oct-18-18 09:45
BTEX by EPA 8021B SUB: T104704219-18-18	<i>Extracted:</i>	Oct-23-18 10:30	Oct-23-18 10:30	Oct-23-18 10:30	Oct-23-18 10:30	Oct-23-18 10:30	Oct-23-18 10:30
	<i>Analyzed:</i>	Oct-23-18 19:11	Oct-23-18 19:38	Oct-23-18 20:05	Oct-23-18 20:32	Oct-23-18 20:58	Oct-23-18 21:25
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.0189 0.0189	<0.0194 0.0194	<0.0179 0.0179	<0.0194 0.0194	<0.0183 0.0183	<0.0200 0.0200
Toluene		<0.0189 0.0189	<0.0194 0.0194	<0.0179 0.0179	<0.0194 0.0194	<0.0183 0.0183	<0.0200 0.0200
Ethylbenzene		<0.0189 0.0189	<0.0194 0.0194	<0.0179 0.0179	<0.0194 0.0194	<0.0183 0.0183	<0.0200 0.0200
m,p-Xylenes		<0.0379 0.0379	<0.0388 0.0388	<0.0357 0.0357	<0.0388 0.0388	<0.0367 0.0367	<0.0399 0.0399
o-Xylene		<0.0189 0.0189	<0.0194 0.0194	<0.0179 0.0179	<0.0194 0.0194	<0.0183 0.0183	<0.0200 0.0200
Total Xylenes		<0.0189 0.0189	<0.0194 0.0194	<0.0179 0.0179	<0.0194 0.0194	<0.0183 0.0183	<0.0200 0.0200
Total BTEX		<0.0189 0.0189	<0.0194 0.0194	<0.0179 0.0179	<0.0194 0.0194	<0.0183 0.0183	<0.0200 0.0200
Inorganic Anions by EPA 300 SUB: T104704219-18-18	<i>Extracted:</i>	Oct-24-18 12:00	Oct-24-18 12:00	Oct-24-18 12:00	Oct-24-18 12:00	Oct-24-18 12:00	Oct-24-18 12:00
	<i>Analyzed:</i>	Oct-24-18 19:19	Oct-24-18 19:31	Oct-24-18 19:44	Oct-24-18 19:56	Oct-24-18 20:09	Oct-24-18 20:21
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		92.1 25.0	290 25.0	174 25.0	283 25.0	155 25.0	269 25.0
TPH by SW8015 Mod	<i>Extracted:</i>	Oct-24-18 07:00	Oct-24-18 07:00	Oct-24-18 07:00	Oct-24-18 07:00	Oct-24-18 07:00	Oct-24-18 07:00
	<i>Analyzed:</i>	Oct-24-18 12:12	Oct-24-18 13:11	Oct-24-18 13:31	Oct-24-18 13:52	Oct-24-18 14:12	Oct-24-18 14:32
	<i>Units/RL:</i>	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	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0
Diesel Range Organics (DRO)		<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0
Total TPH		<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0

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

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 602982

LT Environmental, Inc., Arvada, CO

Project Name: Nash Draw #8 Federal

Project Id: 012918153
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Sat Oct-20-18 09:00 am
Report Date: 26-OCT-18
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	602982-007	602982-008	602982-009	602982-010	602982-011	602982-012
	<i>Field Id:</i>	SS30	SS31	SS32	SS33	SS34	SS35
	<i>Depth:</i>	6- In	6- In	6- In	6- In	6- In	6- In
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Oct-18-18 09:50	Oct-18-18 09:55	Oct-18-18 09:35	Oct-18-18 10:00	Oct-18-18 10:05	Oct-18-18 10:10
BTEX by EPA 8021B SUB: T104704219-18-18	<i>Extracted:</i>	Oct-23-18 10:30	Oct-23-18 10:30	Oct-23-18 10:30	Oct-23-18 10:30	Oct-23-18 10:30	Oct-23-18 10:30
	<i>Analyzed:</i>	Oct-23-18 21:52	Oct-23-18 22:19	Oct-25-18 08:43	Oct-25-18 09:07	Oct-25-18 09:31	Oct-25-18 12:05
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.0192 0.0192	<0.0192 0.0192	<0.0195 0.0195	<0.0195 0.0195	<0.0185 0.0185	<0.0176 0.0176
Toluene		<0.0192 0.0192	<0.0192 0.0192	<0.0195 0.0195	<0.0195 0.0195	<0.0185 0.0185	<0.0176 0.0176
Ethylbenzene		<0.0192 0.0192	<0.0192 0.0192	<0.0195 0.0195	<0.0195 0.0195	<0.0185 0.0185	<0.0176 0.0176
m,p-Xylenes		<0.0385 0.0385	<0.0385 0.0385	<0.0389 0.0389	<0.0391 0.0391	<0.0370 0.0370	<0.0353 0.0353
o-Xylene		<0.0192 0.0192	<0.0192 0.0192	<0.0195 0.0195	<0.0195 0.0195	<0.0185 0.0185	<0.0176 0.0176
Total Xylenes		<0.0192 0.0192	<0.0192 0.0192	<0.0195 0.0195	<0.0195 0.0195	<0.0185 0.0185	<0.0176 0.0176
Total BTEX		<0.0192 0.0192	<0.0192 0.0192	<0.0195 0.0195	<0.0195 0.0195	<0.0185 0.0185	<0.0176 0.0176
Inorganic Anions by EPA 300 SUB: T104704219-18-18	<i>Extracted:</i>	Oct-24-18 12:00	Oct-24-18 12:00	Oct-24-18 12:00	Oct-24-18 12:00	Oct-24-18 12:00	Oct-24-18 12:00
	<i>Analyzed:</i>	Oct-24-18 21:23	Oct-24-18 22:00	Oct-24-18 22:13	Oct-24-18 22:25	Oct-24-18 22:38	Oct-24-18 22:50
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		91.0 25.0	194 25.0	388 125	917 125	187 25.0	56.2 25.0
TPH by SW8015 Mod	<i>Extracted:</i>	Oct-24-18 07:00	Oct-24-18 07:00	Oct-24-18 07:00	Oct-24-18 07:00	Oct-24-18 07:00	Oct-24-18 07:00
	<i>Analyzed:</i>	Oct-24-18 14:52	Oct-24-18 15:12	Oct-24-18 15:32	Oct-24-18 15:51	Oct-24-18 16:49	Oct-24-18 17:09
	<i>Units/RL:</i>	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	<14.9 14.9	<14.9 14.9	<15.0 15.0	<15.0 15.0
Diesel Range Organics (DRO)		<15.0 15.0	<15.0 15.0	<14.9 14.9	<14.9 14.9	<15.0 15.0	<15.0 15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0	<14.9 14.9	<14.9 14.9	<15.0 15.0	<15.0 15.0
Total TPH		<15.0 15.0	<15.0 15.0	<14.9 14.9	<14.9 14.9	<15.0 15.0	<15.0 15.0

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Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 602982

LT Environmental, Inc., Arvada, CO

Project Name: Nash Draw #8 Federal

Project Id: 012918153
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Sat Oct-20-18 09:00 am
Report Date: 26-OCT-18
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	602982-013	602982-014	602982-015			
	<i>Field Id:</i>	SS36	SW11	SW12			
	<i>Depth:</i>	6- In	4- In	4- In			
	<i>Matrix:</i>	SOIL	SOIL	SOIL			
	<i>Sampled:</i>	Oct-18-18 10:15	Oct-18-18 10:50	Oct-18-18 11:00			
BTEX by EPA 8021B SUB: T104704219-18-18	<i>Extracted:</i>	Oct-23-18 10:30	Oct-23-18 10:30	Oct-23-18 10:30			
	<i>Analyzed:</i>	Oct-25-18 13:17	Oct-25-18 13:42	Oct-25-18 14:06			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL			
Benzene		<0.0193 0.0193	<0.0187 0.0187	<0.0185 0.0185			
Toluene		<0.0193 0.0193	<0.0187 0.0187	<0.0185 0.0185			
Ethylbenzene		<0.0193 0.0193	<0.0187 0.0187	<0.0185 0.0185			
m,p-Xylenes		<0.0387 0.0387	<0.0373 0.0373	<0.0370 0.0370			
o-Xylene		<0.0193 0.0193	<0.0187 0.0187	<0.0185 0.0185			
Total Xylenes		<0.0193 0.0193	<0.0187 0.0187	<0.0185 0.0185			
Total BTEX		<0.0193 0.0193	<0.0187 0.0187	<0.0185 0.0185			
Inorganic Anions by EPA 300 SUB: T104704219-18-18	<i>Extracted:</i>	Oct-24-18 12:30	Oct-24-18 12:30	Oct-24-18 12:30			
	<i>Analyzed:</i>	Oct-25-18 11:14	Oct-25-18 11:51	Oct-25-18 12:03			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL			
Chloride		29.7 25.0	100 25.0	151 25.0			
TPH by SW8015 Mod	<i>Extracted:</i>	Oct-24-18 07:00	Oct-24-18 07:00	Oct-24-18 07:00			
	<i>Analyzed:</i>	Oct-24-18 17:28	Oct-24-18 17:47	Oct-24-18 18:06			
	<i>Units/RL:</i>	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			
Diesel Range Organics (DRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0			
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0			
Total TPH		<15.0 15.0	<15.0 15.0	<15.0 15.0			

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Jessica Kramer
Project Assistant



Certificate of Analytical Results 602982



LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: SS24
Lab Sample Id: 602982-001

Matrix: Soil
Date Collected: 10.18.18 09.10

Date Received: 10.20.18 09.00
Sample Depth: 6 In

Analytical Method: Inorganic Anions by EPA 300

Tech: RNL

Analyst: RNL

Seq Number: 3067438

Date Prep: 10.24.18 12.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	92.1	25.0	mg/kg	10.24.18 19.19		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3067454

Date Prep: 10.24.18 07.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.24.18 12.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.24.18 12.12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.24.18 12.12	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.24.18 12.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	10.24.18 12.12	
o-Terphenyl	84-15-1	105	%	70-135	10.24.18 12.12	



Certificate of Analytical Results 602982

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: SS24
 Lab Sample Id: 602982-001

Matrix: Soil
 Date Collected: 10.18.18 09.10

Date Received: 10.20.18 09.00
 Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 10.23.18 10.30

Basis: Wet Weight

Seq Number: 3067329

SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0189	0.0189	mg/kg	10.23.18 19.11	U	1
Toluene	108-88-3	<0.0189	0.0189	mg/kg	10.23.18 19.11	U	1
Ethylbenzene	100-41-4	<0.0189	0.0189	mg/kg	10.23.18 19.11	U	1
m,p-Xylenes	179601-23-1	<0.0379	0.0379	mg/kg	10.23.18 19.11	U	1
o-Xylene	95-47-6	<0.0189	0.0189	mg/kg	10.23.18 19.11	U	1
Total Xylenes	1330-20-7	<0.0189	0.0189	mg/kg	10.23.18 19.11	U	1
Total BTEX		<0.0189	0.0189	mg/kg	10.23.18 19.11	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	93	%	68-120	10.23.18 19.11		
a,a,a-Trifluorotoluene	98-08-8	87	%	71-121	10.23.18 19.11		



Certificate of Analytical Results 602982

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: SS25
Lab Sample Id: 602982-002

Matrix: Soil
Date Collected: 10.18.18 09.15

Date Received: 10.20.18 09.00
Sample Depth: 6 In

Analytical Method: Inorganic Anions by EPA 300

Tech: RNL

Analyst: RNL

Seq Number: 3067438

Date Prep: 10.24.18 12.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	290	25.0	mg/kg	10.24.18 19.31		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3067454

Date Prep: 10.24.18 07.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.24.18 13.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.24.18 13.11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.24.18 13.11	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.24.18 13.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	10.24.18 13.11	
o-Terphenyl	84-15-1	88	%	70-135	10.24.18 13.11	



Certificate of Analytical Results 602982

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: SS25
 Lab Sample Id: 602982-002

Matrix: Soil
 Date Collected: 10.18.18 09.15

Date Received: 10.20.18 09.00
 Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Tech: MIT

Analyst: MIT

Seq Number: 3067329

Date Prep: 10.23.18 10.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0194	0.0194	mg/kg	10.23.18 19.38	U	1
Toluene	108-88-3	<0.0194	0.0194	mg/kg	10.23.18 19.38	U	1
Ethylbenzene	100-41-4	<0.0194	0.0194	mg/kg	10.23.18 19.38	U	1
m,p-Xylenes	179601-23-1	<0.0388	0.0388	mg/kg	10.23.18 19.38	U	1
o-Xylene	95-47-6	<0.0194	0.0194	mg/kg	10.23.18 19.38	U	1
Total Xylenes	1330-20-7	<0.0194	0.0194	mg/kg	10.23.18 19.38	U	1
Total BTEX		<0.0194	0.0194	mg/kg	10.23.18 19.38	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	93	%	68-120	10.23.18 19.38		
a,a,a-Trifluorotoluene	98-08-8	86	%	71-121	10.23.18 19.38		



Certificate of Analytical Results 602982

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: SS26
Lab Sample Id: 602982-003

Matrix: Soil
Date Collected: 10.18.18 09.20

Date Received: 10.20.18 09.00
Sample Depth: 6 In

Analytical Method: Inorganic Anions by EPA 300

Tech: RNL

Analyst: RNL

Seq Number: 3067438

Date Prep: 10.24.18 12.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	174	25.0	mg/kg	10.24.18 19.44		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3067454

Date Prep: 10.24.18 07.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	10.24.18 13.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	10.24.18 13.31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	10.24.18 13.31	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	10.24.18 13.31	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	85	%	70-135	10.24.18 13.31		
o-Terphenyl	84-15-1	86	%	70-135	10.24.18 13.31		



Certificate of Analytical Results 602982

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: SS26
Lab Sample Id: 602982-003

Matrix: Soil
Date Collected: 10.18.18 09.20

Date Received: 10.20.18 09.00
Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Tech: MIT

Analyst: MIT

Seq Number: 3067329

Prep Method: SW5030B

% Moisture:

Date Prep: 10.23.18 10.30

Basis: Wet Weight

SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0179	0.0179	mg/kg	10.23.18 20.05	U	1
Toluene	108-88-3	<0.0179	0.0179	mg/kg	10.23.18 20.05	U	1
Ethylbenzene	100-41-4	<0.0179	0.0179	mg/kg	10.23.18 20.05	U	1
m,p-Xylenes	179601-23-1	<0.0357	0.0357	mg/kg	10.23.18 20.05	U	1
o-Xylene	95-47-6	<0.0179	0.0179	mg/kg	10.23.18 20.05	U	1
Total Xylenes	1330-20-7	<0.0179	0.0179	mg/kg	10.23.18 20.05	U	1
Total BTEX		<0.0179	0.0179	mg/kg	10.23.18 20.05	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	92	%	68-120	10.23.18 20.05		
a,a,a-Trifluorotoluene	98-08-8	85	%	71-121	10.23.18 20.05		



Certificate of Analytical Results 602982



LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: SS27
Lab Sample Id: 602982-004

Matrix: Soil
Date Collected: 10.18.18 09.25

Date Received: 10.20.18 09.00
Sample Depth: 6 In

Analytical Method: Inorganic Anions by EPA 300

Tech: RNL

Analyst: RNL

Seq Number: 3067438

Date Prep: 10.24.18 12.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	283	25.0	mg/kg	10.24.18 19.56		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3067454

Date Prep: 10.24.18 07.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.24.18 13.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.24.18 13.52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.24.18 13.52	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.24.18 13.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	10.24.18 13.52	
o-Terphenyl	84-15-1	90	%	70-135	10.24.18 13.52	



Certificate of Analytical Results 602982



LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: SS27
Lab Sample Id: 602982-004

Matrix: Soil
Date Collected: 10.18.18 09.25

Date Received: 10.20.18 09.00
Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 10.23.18 10.30

Basis: Wet Weight

Seq Number: 3067329

SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0194	0.0194	mg/kg	10.23.18 20.32	U	1
Toluene	108-88-3	<0.0194	0.0194	mg/kg	10.23.18 20.32	U	1
Ethylbenzene	100-41-4	<0.0194	0.0194	mg/kg	10.23.18 20.32	U	1
m,p-Xylenes	179601-23-1	<0.0388	0.0388	mg/kg	10.23.18 20.32	U	1
o-Xylene	95-47-6	<0.0194	0.0194	mg/kg	10.23.18 20.32	U	1
Total Xylenes	1330-20-7	<0.0194	0.0194	mg/kg	10.23.18 20.32	U	1
Total BTEX		<0.0194	0.0194	mg/kg	10.23.18 20.32	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	85	%	68-120	10.23.18 20.32		
a,a,a-Trifluorotoluene	98-08-8	85	%	71-121	10.23.18 20.32		



Certificate of Analytical Results 602982

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: SS28
Lab Sample Id: 602982-005

Matrix: Soil
Date Collected: 10.18.18 09.30

Date Received: 10.20.18 09.00
Sample Depth: 6 In

Analytical Method: Inorganic Anions by EPA 300

Tech: RNL

Analyst: RNL

Seq Number: 3067438

Date Prep: 10.24.18 12.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	155	25.0	mg/kg	10.24.18 20.09		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3067454

Date Prep: 10.24.18 07.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.24.18 14.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.24.18 14.12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.24.18 14.12	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.24.18 14.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	10.24.18 14.12	
o-Terphenyl	84-15-1	87	%	70-135	10.24.18 14.12	



Certificate of Analytical Results 602982

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **SS28**
 Lab Sample Id: 602982-005

Matrix: Soil
 Date Collected: 10.18.18 09.30

Date Received: 10.20.18 09.00
 Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Tech: MIT

Analyst: MIT

Seq Number: 3067329

Date Prep: 10.23.18 10.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0183	0.0183	mg/kg	10.23.18 20.58	U	1
Toluene	108-88-3	<0.0183	0.0183	mg/kg	10.23.18 20.58	U	1
Ethylbenzene	100-41-4	<0.0183	0.0183	mg/kg	10.23.18 20.58	U	1
m,p-Xylenes	179601-23-1	<0.0367	0.0367	mg/kg	10.23.18 20.58	U	1
o-Xylene	95-47-6	<0.0183	0.0183	mg/kg	10.23.18 20.58	U	1
Total Xylenes	1330-20-7	<0.0183	0.0183	mg/kg	10.23.18 20.58	U	1
Total BTEX		<0.0183	0.0183	mg/kg	10.23.18 20.58	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	94	%	68-120	10.23.18 20.58		
a,a,a-Trifluorotoluene	98-08-8	77	%	71-121	10.23.18 20.58		



Certificate of Analytical Results 602982

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **SS29** Matrix: Soil Date Received: 10.20.18 09.00
 Lab Sample Id: 602982-006 Date Collected: 10.18.18 09.45 Sample Depth: 6 In
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: RNL % Moisture:
 Analyst: RNL Date Prep: 10.24.18 12.00 Basis: Wet Weight
 Seq Number: 3067438 SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	269	25.0	mg/kg	10.24.18 20.21		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 10.24.18 07.00 Basis: Wet Weight
 Seq Number: 3067454

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.24.18 14.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.24.18 14.32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.24.18 14.32	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.24.18 14.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	10.24.18 14.32	
o-Terphenyl	84-15-1	102	%	70-135	10.24.18 14.32	



Certificate of Analytical Results 602982



LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: SS29
Lab Sample Id: 602982-006

Matrix: Soil
Date Collected: 10.18.18 09.45

Date Received: 10.20.18 09.00
Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 10.23.18 10.30

Basis: Wet Weight

Seq Number: 3067329

SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0200	0.0200	mg/kg	10.23.18 21.25	U	1
Toluene	108-88-3	<0.0200	0.0200	mg/kg	10.23.18 21.25	U	1
Ethylbenzene	100-41-4	<0.0200	0.0200	mg/kg	10.23.18 21.25	U	1
m,p-Xylenes	179601-23-1	<0.0399	0.0399	mg/kg	10.23.18 21.25	U	1
o-Xylene	95-47-6	<0.0200	0.0200	mg/kg	10.23.18 21.25	U	1
Total Xylenes	1330-20-7	<0.0200	0.0200	mg/kg	10.23.18 21.25	U	1
Total BTEX		<0.0200	0.0200	mg/kg	10.23.18 21.25	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	93	%	68-120	10.23.18 21.25		
a,a,a-Trifluorotoluene	98-08-8	77	%	71-121	10.23.18 21.25		



Certificate of Analytical Results 602982

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: SS30
Lab Sample Id: 602982-007

Matrix: Soil
Date Collected: 10.18.18 09.50

Date Received: 10.20.18 09.00
Sample Depth: 6 In

Analytical Method: Inorganic Anions by EPA 300

Tech: RNL

Analyst: RNL

Seq Number: 3067464

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	91.0	25.0	mg/kg	10.24.18 21.23		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3067454

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.24.18 14.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.24.18 14.52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.24.18 14.52	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.24.18 14.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	10.24.18 14.52	
o-Terphenyl	84-15-1	93	%	70-135	10.24.18 14.52	



Certificate of Analytical Results 602982

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **SS30**
 Lab Sample Id: 602982-007

Matrix: Soil
 Date Collected: 10.18.18 09.50

Date Received: 10.20.18 09.00
 Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Tech: MIT

Analyst: MIT

Seq Number: 3067329

Prep Method: SW5030B

% Moisture:

Date Prep: 10.23.18 10.30

Basis: Wet Weight

SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0192	0.0192	mg/kg	10.23.18 21.52	U	1
Toluene	108-88-3	<0.0192	0.0192	mg/kg	10.23.18 21.52	U	1
Ethylbenzene	100-41-4	<0.0192	0.0192	mg/kg	10.23.18 21.52	U	1
m,p-Xylenes	179601-23-1	<0.0385	0.0385	mg/kg	10.23.18 21.52	U	1
o-Xylene	95-47-6	<0.0192	0.0192	mg/kg	10.23.18 21.52	U	1
Total Xylenes	1330-20-7	<0.0192	0.0192	mg/kg	10.23.18 21.52	U	1
Total BTEX		<0.0192	0.0192	mg/kg	10.23.18 21.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	93	%	68-120	10.23.18 21.52	
a,a,a-Trifluorotoluene	98-08-8	88	%	71-121	10.23.18 21.52	



Certificate of Analytical Results 602982

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **SS31** Matrix: **Soil** Date Received: 10.20.18 09.00
 Lab Sample Id: 602982-008 Date Collected: 10.18.18 09.55 Sample Depth: 6 In
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: **RNL** % Moisture:
 Analyst: **RNL** Date Prep: 10.24.18 12.00 Basis: **Wet Weight**
 Seq Number: 3067464 SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	194	25.0	mg/kg	10.24.18 22.00		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: **ARM** % Moisture:
 Analyst: **ARM** Date Prep: 10.24.18 07.00 Basis: **Wet Weight**
 Seq Number: 3067454

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.24.18 15.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.24.18 15.12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.24.18 15.12	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.24.18 15.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	10.24.18 15.12	
o-Terphenyl	84-15-1	95	%	70-135	10.24.18 15.12	



Certificate of Analytical Results 602982

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: SS31
 Lab Sample Id: 602982-008

Matrix: Soil
 Date Collected: 10.18.18 09.55

Date Received: 10.20.18 09.00
 Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 10.23.18 10.30

Basis: Wet Weight

Seq Number: 3067329

SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0192	0.0192	mg/kg	10.23.18 22.19	U	1
Toluene	108-88-3	<0.0192	0.0192	mg/kg	10.23.18 22.19	U	1
Ethylbenzene	100-41-4	<0.0192	0.0192	mg/kg	10.23.18 22.19	U	1
m,p-Xylenes	179601-23-1	<0.0385	0.0385	mg/kg	10.23.18 22.19	U	1
o-Xylene	95-47-6	<0.0192	0.0192	mg/kg	10.23.18 22.19	U	1
Total Xylenes	1330-20-7	<0.0192	0.0192	mg/kg	10.23.18 22.19	U	1
Total BTEX		<0.0192	0.0192	mg/kg	10.23.18 22.19	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	91	%	68-120	10.23.18 22.19		
a,a,a-Trifluorotoluene	98-08-8	87	%	71-121	10.23.18 22.19		



Certificate of Analytical Results 602982

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: SS32 Matrix: Soil Date Received: 10.20.18 09.00
 Lab Sample Id: 602982-009 Date Collected: 10.18.18 09.35 Sample Depth: 6 In
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: RNL % Moisture:
 Analyst: RNL Date Prep: 10.24.18 12.00 Basis: Wet Weight
 Seq Number: 3067464 SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	388	125	mg/kg	10.24.18 22.13		5

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 10.24.18 07.00 Basis: Wet Weight
 Seq Number: 3067454

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	10.24.18 15.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	10.24.18 15.32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	10.24.18 15.32	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	10.24.18 15.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	10.24.18 15.32	
o-Terphenyl	84-15-1	96	%	70-135	10.24.18 15.32	



Certificate of Analytical Results 602982



LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: SS32
Lab Sample Id: 602982-009

Matrix: Soil
Date Collected: 10.18.18 09.35

Date Received: 10.20.18 09.00
Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 10.23.18 10.30

Basis: Wet Weight

Seq Number: 3067556

SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0195	0.0195	mg/kg	10.25.18 08.43	U	1
Toluene	108-88-3	<0.0195	0.0195	mg/kg	10.25.18 08.43	U	1
Ethylbenzene	100-41-4	<0.0195	0.0195	mg/kg	10.25.18 08.43	U	1
m,p-Xylenes	179601-23-1	<0.0389	0.0389	mg/kg	10.25.18 08.43	U	1
o-Xylene	95-47-6	<0.0195	0.0195	mg/kg	10.25.18 08.43	U	1
Total Xylenes	1330-20-7	<0.0195	0.0195	mg/kg	10.25.18 08.43	U	1
Total BTEX		<0.0195	0.0195	mg/kg	10.25.18 08.43	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	106	%	68-120	10.25.18 08.43		
a,a,a-Trifluorotoluene	98-08-8	109	%	71-121	10.25.18 08.43		



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LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: SS33
 Lab Sample Id: 602982-010

Matrix: Soil
 Date Collected: 10.18.18 10.00

Date Received: 10.20.18 09.00
 Sample Depth: 6 In

Analytical Method: Inorganic Anions by EPA 300

Tech: RNL

Analyst: RNL

Seq Number: 3067464

Date Prep: 10.24.18 12.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	917	125	mg/kg	10.24.18 22.25		5

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3067454

Date Prep: 10.24.18 07.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	10.24.18 15.51	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	10.24.18 15.51	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	10.24.18 15.51	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	10.24.18 15.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	10.24.18 15.51	
o-Terphenyl	84-15-1	100	%	70-135	10.24.18 15.51	



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LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: SS33
Lab Sample Id: 602982-010

Matrix: Soil
Date Collected: 10.18.18 10.00

Date Received: 10.20.18 09.00
Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 10.23.18 10.30

Basis: Wet Weight

Seq Number: 3067556

SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0195	0.0195	mg/kg	10.25.18 09.07	U	1
Toluene	108-88-3	<0.0195	0.0195	mg/kg	10.25.18 09.07	U	1
Ethylbenzene	100-41-4	<0.0195	0.0195	mg/kg	10.25.18 09.07	U	1
m,p-Xylenes	179601-23-1	<0.0391	0.0391	mg/kg	10.25.18 09.07	U	1
o-Xylene	95-47-6	<0.0195	0.0195	mg/kg	10.25.18 09.07	U	1
Total Xylenes	1330-20-7	<0.0195	0.0195	mg/kg	10.25.18 09.07	U	1
Total BTEX		<0.0195	0.0195	mg/kg	10.25.18 09.07	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	94	%	68-120	10.25.18 09.07		
a,a,a-Trifluorotoluene	98-08-8	98	%	71-121	10.25.18 09.07		



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LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **SS34**
Lab Sample Id: 602982-011

Matrix: Soil
Date Collected: 10.18.18 10.05

Date Received: 10.20.18 09.00
Sample Depth: 6 In

Analytical Method: Inorganic Anions by EPA 300

Tech: RNL

Analyst: RNL

Seq Number: 3067464

Date Prep: 10.24.18 12.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	187	25.0	mg/kg	10.24.18 22.38		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3067454

Date Prep: 10.24.18 07.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.24.18 16.49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.24.18 16.49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.24.18 16.49	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.24.18 16.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	10.24.18 16.49	
o-Terphenyl	84-15-1	92	%	70-135	10.24.18 16.49	



Certificate of Analytical Results 602982



LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **SS34**
Lab Sample Id: 602982-011

Matrix: Soil
Date Collected: 10.18.18 10.05

Date Received: 10.20.18 09.00
Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Tech: MIT

Analyst: MIT

Seq Number: 3067556

Prep Method: SW5030B

% Moisture:

Date Prep: 10.23.18 10.30

Basis: Wet Weight

SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0185	0.0185	mg/kg	10.25.18 09.31	U	1
Toluene	108-88-3	<0.0185	0.0185	mg/kg	10.25.18 09.31	U	1
Ethylbenzene	100-41-4	<0.0185	0.0185	mg/kg	10.25.18 09.31	U	1
m,p-Xylenes	179601-23-1	<0.0370	0.0370	mg/kg	10.25.18 09.31	U	1
o-Xylene	95-47-6	<0.0185	0.0185	mg/kg	10.25.18 09.31	U	1
Total Xylenes	1330-20-7	<0.0185	0.0185	mg/kg	10.25.18 09.31	U	1
Total BTEX		<0.0185	0.0185	mg/kg	10.25.18 09.31	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	73	%	68-120	10.25.18 09.31		
a,a,a-Trifluorotoluene	98-08-8	77	%	71-121	10.25.18 09.31		



Certificate of Analytical Results 602982

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: SS35
Lab Sample Id: 602982-012

Matrix: Soil
Date Collected: 10.18.18 10.10

Date Received: 10.20.18 09.00
Sample Depth: 6 In

Analytical Method: Inorganic Anions by EPA 300

Tech: RNL

Analyst: RNL

Seq Number: 3067464

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	56.2	25.0	mg/kg	10.24.18 22.50		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3067454

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.24.18 17.09	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.24.18 17.09	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.24.18 17.09	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.24.18 17.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	10.24.18 17.09	
o-Terphenyl	84-15-1	110	%	70-135	10.24.18 17.09	



Certificate of Analytical Results 602982

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: SS35
 Lab Sample Id: 602982-012

Matrix: Soil
 Date Collected: 10.18.18 10.10

Date Received: 10.20.18 09.00
 Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 10.23.18 10.30

Basis: Wet Weight

Seq Number: 3067556

SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0176	0.0176	mg/kg	10.25.18 12.05	U	1
Toluene	108-88-3	<0.0176	0.0176	mg/kg	10.25.18 12.05	U	1
Ethylbenzene	100-41-4	<0.0176	0.0176	mg/kg	10.25.18 12.05	U	1
m,p-Xylenes	179601-23-1	<0.0353	0.0353	mg/kg	10.25.18 12.05	U	1
o-Xylene	95-47-6	<0.0176	0.0176	mg/kg	10.25.18 12.05	U	1
Total Xylenes	1330-20-7	<0.0176	0.0176	mg/kg	10.25.18 12.05	U	1
Total BTEX		<0.0176	0.0176	mg/kg	10.25.18 12.05	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	108	%	68-120	10.25.18 12.05		
a,a,a-Trifluorotoluene	98-08-8	109	%	71-121	10.25.18 12.05		



Certificate of Analytical Results 602982

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **SS36** Matrix: **Soil** Date Received: 10.20.18 09.00
 Lab Sample Id: 602982-013 Date Collected: 10.18.18 10.15 Sample Depth: 6 In
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: **RNL** % Moisture:
 Analyst: **RNL** Date Prep: 10.24.18 12.30 Basis: **Wet Weight**
 Seq Number: 3067531 SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	29.7	25.0	mg/kg	10.25.18 11.14		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: **ARM** % Moisture:
 Analyst: **ARM** Date Prep: 10.24.18 07.00 Basis: **Wet Weight**
 Seq Number: 3067454

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.24.18 17.28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.24.18 17.28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.24.18 17.28	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.24.18 17.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	10.24.18 17.28	
o-Terphenyl	84-15-1	95	%	70-135	10.24.18 17.28	



Certificate of Analytical Results 602982

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: SS36
 Lab Sample Id: 602982-013

Matrix: Soil
 Date Collected: 10.18.18 10.15

Date Received: 10.20.18 09.00
 Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 10.23.18 10.30

Basis: Wet Weight

Seq Number: 3067556

SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0193	0.0193	mg/kg	10.25.18 13.17	U	1
Toluene	108-88-3	<0.0193	0.0193	mg/kg	10.25.18 13.17	U	1
Ethylbenzene	100-41-4	<0.0193	0.0193	mg/kg	10.25.18 13.17	U	1
m,p-Xylenes	179601-23-1	<0.0387	0.0387	mg/kg	10.25.18 13.17	U	1
o-Xylene	95-47-6	<0.0193	0.0193	mg/kg	10.25.18 13.17	U	1
Total Xylenes	1330-20-7	<0.0193	0.0193	mg/kg	10.25.18 13.17	U	1
Total BTEX		<0.0193	0.0193	mg/kg	10.25.18 13.17	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	83	%	68-120	10.25.18 13.17		
a,a,a-Trifluorotoluene	98-08-8	88	%	71-121	10.25.18 13.17		



Certificate of Analytical Results 602982

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **SW11** Matrix: Soil Date Received: 10.20.18 09.00
 Lab Sample Id: 602982-014 Date Collected: 10.18.18 10.50 Sample Depth: 4 In
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: RNL % Moisture:
 Analyst: RNL Date Prep: 10.24.18 12.30 Basis: Wet Weight
 Seq Number: 3067531 SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	100	25.0	mg/kg	10.25.18 11.51		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 10.24.18 07.00 Basis: Wet Weight
 Seq Number: 3067454

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.24.18 17.47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.24.18 17.47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.24.18 17.47	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.24.18 17.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	10.24.18 17.47	
o-Terphenyl	84-15-1	94	%	70-135	10.24.18 17.47	



Certificate of Analytical Results 602982

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **SW11**
 Lab Sample Id: 602982-014

Matrix: Soil
 Date Collected: 10.18.18 10.50

Date Received: 10.20.18 09.00
 Sample Depth: 4 In

Analytical Method: BTEX by EPA 8021B

Tech: MIT

Analyst: MIT

Seq Number: 3067556

Prep Method: SW5030B

% Moisture:

Date Prep: 10.23.18 10.30

Basis: Wet Weight

SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0187	0.0187	mg/kg	10.25.18 13.42	U	1
Toluene	108-88-3	<0.0187	0.0187	mg/kg	10.25.18 13.42	U	1
Ethylbenzene	100-41-4	<0.0187	0.0187	mg/kg	10.25.18 13.42	U	1
m,p-Xylenes	179601-23-1	<0.0373	0.0373	mg/kg	10.25.18 13.42	U	1
o-Xylene	95-47-6	<0.0187	0.0187	mg/kg	10.25.18 13.42	U	1
Total Xylenes	1330-20-7	<0.0187	0.0187	mg/kg	10.25.18 13.42	U	1
Total BTEX		<0.0187	0.0187	mg/kg	10.25.18 13.42	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	98	%	68-120	10.25.18 13.42		
a,a,a-Trifluorotoluene	98-08-8	105	%	71-121	10.25.18 13.42		



Certificate of Analytical Results 602982

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **SW12** Matrix: Soil Date Received: 10.20.18 09.00
 Lab Sample Id: 602982-015 Date Collected: 10.18.18 11.00 Sample Depth: 4 In
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: RNL % Moisture:
 Analyst: RNL Date Prep: 10.24.18 12.30 Basis: Wet Weight
 Seq Number: 3067531 SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	151	25.0	mg/kg	10.25.18 12.03		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 10.24.18 07.00 Basis: Wet Weight
 Seq Number: 3067454

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.24.18 18.06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.24.18 18.06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.24.18 18.06	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.24.18 18.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	10.24.18 18.06	
o-Terphenyl	84-15-1	105	%	70-135	10.24.18 18.06	



Certificate of Analytical Results 602982

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **SW12**
 Lab Sample Id: 602982-015

Matrix: Soil
 Date Collected: 10.18.18 11.00

Date Received: 10.20.18 09.00
 Sample Depth: 4 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 10.23.18 10.30

Basis: Wet Weight

Seq Number: 3067556

SUB: T104704219-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0185	0.0185	mg/kg	10.25.18 14.06	U	1
Toluene	108-88-3	<0.0185	0.0185	mg/kg	10.25.18 14.06	U	1
Ethylbenzene	100-41-4	<0.0185	0.0185	mg/kg	10.25.18 14.06	U	1
m,p-Xylenes	179601-23-1	<0.0370	0.0370	mg/kg	10.25.18 14.06	U	1
o-Xylene	95-47-6	<0.0185	0.0185	mg/kg	10.25.18 14.06	U	1
Total Xylenes	1330-20-7	<0.0185	0.0185	mg/kg	10.25.18 14.06	U	1
Total BTEX		<0.0185	0.0185	mg/kg	10.25.18 14.06	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	111	%	68-120	10.25.18 14.06		
a,a,a-Trifluorotoluene	98-08-8	108	%	71-121	10.25.18 14.06		



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



LT Environmental, Inc.

Nash Draw #8 Federal

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3067438

MB Sample Id: 7664782-1-BLK

Matrix: Solid

LCS Sample Id: 7664782-1-BKS

Prep Method: E300P

Date Prep: 10.24.18

LCSD Sample Id: 7664782-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2.26	250	250	100	249	100	90-110	0	20	mg/kg	10.24.18 14:58	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3067464

MB Sample Id: 7664789-1-BLK

Matrix: Solid

LCS Sample Id: 7664789-1-BKS

Prep Method: E300P

Date Prep: 10.24.18

LCSD Sample Id: 7664789-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<25.0	250	246	98	251	100	90-110	2	20	mg/kg	10.24.18 20:58	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3067531

MB Sample Id: 7664845-1-BLK

Matrix: Solid

LCS Sample Id: 7664845-1-BKS

Prep Method: E300P

Date Prep: 10.24.18

LCSD Sample Id: 7664845-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<25.0	250	239	96	232	93	90-110	3	20	mg/kg	10.25.18 10:49	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3067438

Parent Sample Id: 602980-001

Matrix: Soil

MS Sample Id: 602980-001 S

Prep Method: E300P

Date Prep: 10.24.18

MSD Sample Id: 602980-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	380	250	674	118	682	121	80-120	1	20	mg/kg	10.24.18 15:48	X

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3067438

Parent Sample Id: 602981-008

Matrix: Soil

MS Sample Id: 602981-008 S

Prep Method: E300P

Date Prep: 10.24.18

MSD Sample Id: 602981-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1070	250	1510	176	1480	164	80-120	2	20	mg/kg	10.24.18 18:29	X

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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



LT Environmental, Inc.

Nash Draw #8 Federal

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3067464

Parent Sample Id: 602982-007

Matrix: Soil

MS Sample Id: 602982-007 S

Prep Method: E300P

Date Prep: 10.24.18

MSD Sample Id: 602982-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	91.0	250	324	93	326	94	80-120	1	20	mg/kg	10.24.18 21:36	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3067531

Parent Sample Id: 602982-013

Matrix: Soil

MS Sample Id: 602982-013 S

Prep Method: E300P

Date Prep: 10.24.18

MSD Sample Id: 602982-013 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	29.7	250	255	90	262	93	80-120	3	20	mg/kg	10.25.18 11:26	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3067454

MB Sample Id: 7664784-1-BLK

Matrix: Solid

LCS Sample Id: 7664784-1-BKS

Prep Method: TX1005P

Date Prep: 10.24.18

LCSD Sample Id: 7664784-1-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	957	96	977	98	70-135	2	20	mg/kg	10.24.18 11:33	
Diesel Range Organics (DRO)	<8.13	1000	1060	106	1060	106	70-135	0	20	mg/kg	10.24.18 11:33	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	93		125		124		70-135	%	10.24.18 11:33
o-Terphenyl	96		105		101		70-135	%	10.24.18 11:33

Analytical Method: TPH by SW8015 Mod

Seq Number: 3067454

Parent Sample Id: 602982-001

Matrix: Soil

MS Sample Id: 602982-001 S

Prep Method: TX1005P

Date Prep: 10.24.18

MSD Sample Id: 602982-001 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	925	93	1030	103	70-135	11	20	mg/kg	10.24.18 12:32	
Diesel Range Organics (DRO)	9.06	997	968	96	1070	106	70-135	10	20	mg/kg	10.24.18 12:32	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	115		130		70-135	%	10.24.18 12:32
o-Terphenyl	95		126		70-135	%	10.24.18 12:32

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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



LT Environmental, Inc.

Nash Draw #8 Federal

Analytical Method: BTEX by EPA 8021B

Seq Number: 3067329

MB Sample Id: 7664682-1-BLK

Matrix: Solid

LCS Sample Id: 7664682-1-BKS

Prep Method: SW5030B

Date Prep: 10.23.18

LCSD Sample Id: 7664682-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.0200	2.00	2.06	103	1.99	100	55-120	3	20	mg/kg	10.23.18 09:43	
Toluene	<0.0200	2.00	1.89	95	1.77	89	77-120	7	20	mg/kg	10.23.18 09:43	
Ethylbenzene	<0.0200	2.00	1.81	91	1.69	85	77-120	7	20	mg/kg	10.23.18 09:43	
m,p-Xylenes	<0.00682	4.00	3.71	93	3.46	87	78-120	7	20	mg/kg	10.23.18 09:43	
o-Xylene	<0.0200	2.00	1.86	93	1.69	85	78-120	10	20	mg/kg	10.23.18 09:43	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	86		88		84		68-120	%	10.23.18 09:43
a,a,a-Trifluorotoluene	76		86		87		71-121	%	10.23.18 09:43

Analytical Method: BTEX by EPA 8021B

Seq Number: 3067556

MB Sample Id: 7664798-1-BLK

Matrix: Solid

LCS Sample Id: 7664798-1-BKS

Prep Method: SW5030B

Date Prep: 10.23.18

LCSD Sample Id: 7664798-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.0200	2.00	1.77	89	1.78	89	55-120	1	20	mg/kg	10.25.18 03:31	
Toluene	<0.0200	2.00	1.80	90	1.72	86	77-120	5	20	mg/kg	10.25.18 03:31	
Ethylbenzene	<0.0200	2.00	2.00	100	1.80	90	77-120	11	20	mg/kg	10.25.18 03:31	
m,p-Xylenes	<0.0400	4.00	4.00	100	3.58	90	78-120	11	20	mg/kg	10.25.18 03:31	
o-Xylene	<0.0200	2.00	1.96	98	1.83	92	78-120	7	20	mg/kg	10.25.18 03:31	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	92		84		67	**	68-120	%	10.25.18 03:31
a,a,a-Trifluorotoluene	88		78		71		71-121	%	10.25.18 03:31

Analytical Method: BTEX by EPA 8021B

Seq Number: 3067329

Parent Sample Id: 602980-001

Matrix: Soil

MS Sample Id: 602980-001 S

Prep Method: SW5030B

Date Prep: 10.23.18

MSD Sample Id: 602980-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.0193	1.93	1.83	95	0.935	49	54-120	65	25	mg/kg	10.23.18 17:23	XF
Toluene	<0.00453	1.93	1.77	92	0.901	47	57-120	65	25	mg/kg	10.23.18 17:23	XF
Ethylbenzene	<0.0193	1.93	1.76	91	0.905	47	58-131	64	25	mg/kg	10.23.18 17:23	XF
m,p-Xylenes	0.0172	3.87	3.60	93	1.72	45	62-124	71	25	mg/kg	10.23.18 17:23	XF
o-Xylene	<0.00660	1.93	1.77	92	0.851	45	62-124	70	25	mg/kg	10.23.18 17:23	XF

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	93		47	**	68-120	%	10.23.18 17:23
a,a,a-Trifluorotoluene	100		43	**	71-121	%	10.23.18 17:23

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C-A) / B$
 $RPD = 200 * |(C-E) / (C+E)|$
 $[D] = 100 * (C) / [B]$
 $\text{Log Diff.} = \text{Log}(\text{Sample Duplicate}) - \text{Log}(\text{Original Sample})$

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



LT Environmental, Inc.

Nash Draw #8 Federal

Analytical Method: BTEX by EPA 8021B

Seq Number: 3067556

Parent Sample Id: 602982-009

Matrix: Soil

MS Sample Id: 602982-009 S

Prep Method: SW5030B

Date Prep: 10.23.18

MSD Sample Id: 602982-009 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.0196	1.96	1.65	84	1.69	85	54-120	2	25	mg/kg	10.25.18 10:52	
Toluene	<0.0196	1.96	1.70	87	1.69	85	57-120	1	25	mg/kg	10.25.18 10:52	
Ethylbenzene	<0.0196	1.96	1.78	91	1.80	91	58-131	1	25	mg/kg	10.25.18 10:52	
m,p-Xylenes	<0.0391	3.91	3.57	91	3.59	90	62-124	1	25	mg/kg	10.25.18 10:52	
o-Xylene	<0.0196	1.96	1.75	89	1.77	89	62-124	1	25	mg/kg	10.25.18 10:52	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	90		100		68-120	%	10.25.18 10:52
a,a,a-Trifluorotoluene	95		109		71-121	%	10.25.18 10:52

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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



Chain of Custody

Work Order No: 1002992

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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Page 1 of 2

Project Manager:	Adrian Baker	Bill to: (if different)	Kyle Cittern
Company Name:	IT Environmental	Company Name:	XTE
Address:	3300 A'street, Building 1, #103	Address:	
City, State ZIP:	Arlington, TX 76010	City, State ZIP:	
Phone:	(432) 704-5178	Email:	ABaker@ITenv.com

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

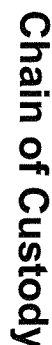
Project Name:	Utah Creek #8 Federal	Turn Around	☒
Project Number:	012918153	Routine	☒
P.O. Number:	24P-5007	Rush:	
Sampler's Name:	Fabian Lumbani	Due Date:	

SAMPLE RECEIPT	Temp Blank:	Yes ☒ No ☐	Wet Ice:	Yes ☒ No ☐
	Temperature (°C):	3.0	Thermometer ID: 128	
	Received Inact:	Yes ☒ No ☐	Correction Factor: 0.0	
	Cooler Custody Seals:	Yes ☒ No ☐	Total Containers:	
Sample Custody Seals:	Yes ☒ No ☐			

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	ANALYSIS REQUEST	Work Order Notes
SS24	S	10/18/18	0910	6"	1	BTEX (only BTEX)	
SS25	S	10/18/18	0915	6"	1	TAT (620) (DRO) (URO)	
SS26	S	10/18/18	0920	6"	1	Chlorides (300.00)	
SS27	S	10/18/18	0925	6"	1		
SS28	S	10/18/18	0930	6"	1		
SS29	S	10/18/18	0945	6"	1		
SS30	S	10/18/18	0950	6"	1		
SS31	S	10/18/18	0955	6"	1		
SS32	S	10/18/18	0935	6"	1		
SS33	S	10/18/18	1000	6"	1		

Total 200.7 / 6010	200.8 / 6020:	8RCRA 13PPM Texas 11	Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed	TCIP / SPLP 6010:	8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U	1631 / 245.1 / 7470 / 7471 : Hg

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1. B. Baker	Chae Palmer	10/19/18 @ 1455	2. Chae Palmer	ABaker	10/20/18 @ 0900
3.			4.		
5.			6.		



102987

Page 2 of 2

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐

State of Project:

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

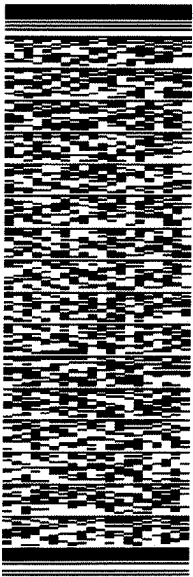
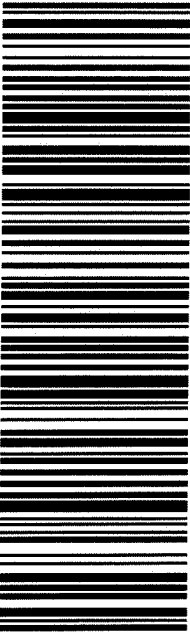
Deliverables: EDD ☐ ADAPT ☐ Other: _____

SAMPLE RECEIPT		Temp Blank:	Yes	No	Wet Ice:	Yes	No
Temperature (°C):	50						
Received Intact:	Yes	No					
Cooler Custody Seals:	Yes	No	N/A		Correction Factor:	0.0	
Sample Custody Seals:	Yes	No	N/A		Total Containers:		

[illegible]

at assigns standard terms and conditions due to circumstances beyond the control of the contractor, the contractor is not forced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 <i>J. J. R.</i>	<i>Wesley R. R.</i>	10/19/18 @ 1455	2 <i>Wesley R. R.</i>	<i>Wesley R. R.</i>	10/19/18 @ 1455
3			4		
5			6		

ORIGIN DCAQA (575) 887-6245 XENCO SATURDAY PAC N MAIL 910 W PIERCE ST CARLSBAD, NM 88220 UNITED STATES US	SHIP DATE: 19OCT18 ACTWGT: 68.00 LB CAD: 101813706/NET4040 DIMS: 26x14x15 IN BILL RECIPIENT
TO HOLD FOR XENCO FEDEX OFFICE PRINT & SHIP CENTER FEDEX OFFICE PRINT & SHIP CENTER 200 W INTERSTATE 20 MIDLAND TX 79701 (806) 674-0639 NV PO DEPT	
REF: XENCO DEPT	
 	
TRK# 7735 2502 8770 0201 41 MAFA TX-US LBB	SATURDAY HOLD PRIORITY OVERNIGHT HLD MAFKI
	

552J1/88FB/DCA5

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.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com. FedEx will not be responsible for any claim in excess of \$100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of \$100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is \$1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

Inter-Office Shipment

IOS Number **115864**

Date/Time: 10/22/18 08:48

Created by: Brianna Teel

Please send report to: Jessica Kramer

Lab# From: **Midland**

Delivery Priority:

Address: 1211 W. Florida Ave, Midland TX 79701

Lab# To: **Lubbock**

Air Bill No.: fedex

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
602982-001	S	SS24	10/18/18 09:10	SW8021B	BTEX by EPA 8021B	10/26/18	11/01/18	JKR	BR4FBZ BZ BZME EBZ X	
602982-001	S	SS24	10/18/18 09:10	E300	Inorganic Anions by EPA 300	10/26/18	11/15/18	JKR	CL	
602982-002	S	SS25	10/18/18 09:15	E300	Inorganic Anions by EPA 300	10/26/18	11/15/18	JKR	CL	
602982-002	S	SS25	10/18/18 09:15	SW8021B	BTEX by EPA 8021B	10/26/18	11/01/18	JKR	BR4FBZ BZ BZME EBZ X	
602982-003	S	SS26	10/18/18 09:20	E300	Inorganic Anions by EPA 300	10/26/18	11/15/18	JKR	CL	
602982-003	S	SS26	10/18/18 09:20	SW8021B	BTEX by EPA 8021B	10/26/18	11/01/18	JKR	BR4FBZ BZ BZME EBZ X	
602982-004	S	SS27	10/18/18 09:25	E300	Inorganic Anions by EPA 300	10/26/18	11/15/18	JKR	CL	
602982-004	S	SS27	10/18/18 09:25	SW8021B	BTEX by EPA 8021B	10/26/18	11/01/18	JKR	BR4FBZ BZ BZME EBZ X	
602982-005	S	SS28	10/18/18 09:30	SW8021B	BTEX by EPA 8021B	10/26/18	11/01/18	JKR	BR4FBZ BZ BZME EBZ X	
602982-005	S	SS28	10/18/18 09:30	E300	Inorganic Anions by EPA 300	10/26/18	11/15/18	JKR	CL	
602982-006	S	SS29	10/18/18 09:45	E300	Inorganic Anions by EPA 300	10/26/18	11/15/18	JKR	CL	
602982-006	S	SS29	10/18/18 09:45	SW8021B	BTEX by EPA 8021B	10/26/18	11/01/18	JKR	BR4FBZ BZ BZME EBZ X	
602982-007	S	SS30	10/18/18 09:50	SW8021B	BTEX by EPA 8021B	10/26/18	11/01/18	JKR	BR4FBZ BZ BZME EBZ X	
602982-007	S	SS30	10/18/18 09:50	E300	Inorganic Anions by EPA 300	10/26/18	11/15/18	JKR	CL	
602982-008	S	SS31	10/18/18 09:55	E300	Inorganic Anions by EPA 300	10/26/18	11/15/18	JKR	CL	
602982-008	S	SS31	10/18/18 09:55	SW8021B	BTEX by EPA 8021B	10/26/18	11/01/18	JKR	BR4FBZ BZ BZME EBZ X	
602982-009	S	SS32	10/18/18 09:35	E300	Inorganic Anions by EPA 300	10/26/18	11/15/18	JKR	CL	
602982-009	S	SS32	10/18/18 09:35	SW8021B	BTEX by EPA 8021B	10/26/18	11/01/18	JKR	BR4FBZ BZ BZME EBZ X	
602982-010	S	SS33	10/18/18 10:00	E300	Inorganic Anions by EPA 300	10/26/18	11/15/18	JKR	CL	
602982-010	S	SS33	10/18/18 10:00	SW8021B	BTEX by EPA 8021B	10/26/18	11/01/18	JKR	BR4FBZ BZ BZME EBZ X	
602982-011	S	SS34	10/18/18 10:05	E300	Inorganic Anions by EPA 300	10/26/18	11/15/18	JKR	CL	
602982-011	S	SS34	10/18/18 10:05	SW8021B	BTEX by EPA 8021B	10/26/18	11/01/18	JKR	BR4FBZ BZ BZME EBZ X	
602982-012	S	SS35	10/18/18 10:10	E300	Inorganic Anions by EPA 300	10/26/18	11/15/18	JKR	CL	
602982-012	S	SS35	10/18/18 10:10	SW8021B	BTEX by EPA 8021B	10/26/18	11/01/18	JKR	BR4FBZ BZ BZME EBZ X	
602982-013	S	SS36	10/18/18 10:15	E300	Inorganic Anions by EPA 300	10/26/18	11/15/18	JKR	CL	



Inter-Office Shipment

Page 2 of 2

IOS Number **115864**

Date/Time: 10/22/18 08:48

Created by: Brianna Teel

Please send report to: Jessica Kramer

Lab# From: **Midland**

Delivery Priority:

Address: 1211 W. Florida Ave, Midland TX 79701

Lab# To: **Lubbock**

Air Bill No.: fedex

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
602982-013	S	SS36	10/18/18 10:15	SW8021B	BTEX by EPA 8021B	10/26/18	11/01/18	JKR	BR4FBZ BZ BZME EBZ X	
602982-014	S	SW11	10/18/18 10:50	E300	Inorganic Anions by EPA 300	10/26/18	11/15/18	JKR	CL	
602982-014	S	SW11	10/18/18 10:50	SW8021B	BTEX by EPA 8021B	10/26/18	11/01/18	JKR	BR4FBZ BZ BZME EBZ X	
602982-015	S	SW12	10/18/18 11:00	SW8021B	BTEX by EPA 8021B	10/26/18	11/01/18	JKR	BR4FBZ BZ BZME EBZ X	
602982-015	S	SW12	10/18/18 11:00	E300	Inorganic Anions by EPA 300	10/26/18	11/15/18	JKR	CL	

Inter Office Shipment or Sample Comments:

Relinquished By:

Brianna Teel

Date Relinquished: 10/22/2018

Received By:

Ashley Derstine

Date Received: 10/23/2018 09:00

Cooler Temperature: 2.9



XENCO Laboratories



Inter Office Report- Sample Receipt Checklist

Sent To: Lubbock

IOS #: 115864

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used :

Sent By: Brianna Teel

Date Sent: 10/22/2018 08:48 AM

Received By: Ashley Derstine

Date Received: 10/23/2018 09:00 AM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	2.9
#2 *Shipping container in good condition?	Yes
#3 *Samples received with appropriate temperature?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	No
#5 *Custody Seals Signed and dated for Containers/coolers	No
#6 *IOS present?	No
#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:

Ashley Derstine

Date: 10/23/2018



Client: LT Environmental, Inc.

Date/ Time Received: 10/20/2018 09:00:00 AM

Work Order #: 602982

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)?	3	
#2 *Shipping container in good condition?	Yes	
#3 *Samples received on ice?	Yes	
#4 *Custody Seals intact on shipping container/ cooler?	N/A	
#5 Custody Seals intact on sample bottles?	N/A	
#6 *Custody Seals Signed and dated?	N/A	
#7 *Chain of Custody present?	Yes	
#8 Any missing/extra samples?	No	
#9 Chain of Custody signed when relinquished/ received?	Yes	
#10 Chain of Custody agrees with sample labels/matrix?	Yes	
#11 Container label(s) legible and intact?	Yes	
#12 Samples in proper container/ bottle?	Yes	
#13 Samples properly preserved?	Yes	
#14 Sample container(s) intact?	Yes	
#15 Sufficient sample amount for indicated test(s)?	Yes	
#16 All samples received within hold time?	Yes	
#17 Subcontract of sample(s)?	Yes	Lubbock-BTEX & Chlorides
#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: 10/22/2018

Checklist reviewed by:

Jessica Kramer

Date: 10/22/2018

Analytical Report 603513

for
LT Environmental, Inc.

Project Manager: Adrian Baker

Nash Draw #8 Federal

30-OCT-18

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-18-28), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (T104704295-18-17), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)

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-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)

Xenco-Atlanta (LELAP Lab ID #04176)

Xenco-Tampa: Florida (E87429)

Xenco-Lakeland: Florida (E84098)



30-OCT-18

Project Manager: **Adrian Baker**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **603513**

Nash Draw #8 Federal

Project Address: Carlsbad, NM

Adrian Baker:

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) 603513. 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. 603513 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,

A handwritten signature in black ink that reads '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 603513

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS37	S	10-22-18 13:15	1 ft	603513-001
SS38	S	10-22-18 13:20	1 ft	603513-002
SS39	S	10-22-18 13:25	1 ft	603513-003
SS40	S	10-22-18 13:30	1 ft	603513-004
SS41	S	10-22-18 13:35	1 ft	603513-005
SS42	S	10-22-18 13:40	1 ft	603513-006
SS43	S	10-22-18 13:45	1 ft	603513-007
SS44	S	10-22-18 13:50	1 ft	603513-008
SS45	S	10-22-18 14:00	1 ft	603513-009
SS46	S	10-22-18 14:10	1 ft	603513-010
SS47	S	10-22-18 14:20	1 ft	603513-011
SS48	S	10-22-18 14:25	1 ft	603513-012
SS49	S	10-22-18 14:30	1 ft	603513-013
SS50	S	10-22-18 14:40	1 ft	603513-014
SS51	S	10-22-18 14:45	1 ft	603513-015
SS52	S	10-22-18 14:50	1 ft	603513-016
SS53	S	10-22-18 14:55	1 ft	603513-017
SS54	S	10-22-18 15:00	1 ft	603513-018
SS55	S	10-22-18 15:10	1 ft	603513-019
SS56	S	10-22-18 15:12	1 ft	603513-020
SS57	S	10-22-18 15:15	1 ft	603513-021
SS58	S	10-22-18 15:17	1 ft	603513-022
SS59	S	10-22-18 15:20	1 ft	603513-023
SS60	S	10-22-18 15:25	1 ft	603513-024
SS61	S	10-22-18 15:30	1 ft	603513-025
SS62	S	10-22-18 15:40	1 ft	603513-026

**CASE NARRATIVE****Client Name: LT Environmental, Inc.****Project Name: Nash Draw #8 Federal**Project ID:
Work Order Number(s): 603513Report Date: 30-OCT-18
Date Received: 10/25/2018

Sample receipt non conformances and comments:None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3067712 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3067791 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3067839 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Lab Sample ID 603513-022 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 603513-022, -023, -024, -025, -026.

The Laboratory Control Sample for Toluene, Benzene, m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.



Certificate of Analysis Summary 603513

LT Environmental, Inc., Arvada, CO

Project Name: Nash Draw #8 Federal

Project Id:

Contact: Adrian Baker

Project Location: Carlsbad, NM

Date Received in Lab: Thu Oct-25-18 11:35 am

Report Date: 30-OCT-18

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	603513-001	603513-002	603513-003	603513-004	603513-005	603513-006
	<i>Field Id:</i>	SS37	SS38	SS39	SS40	SS41	SS42
	<i>Depth:</i>	1- ft	1- ft	1- ft	1- ft	1- ft	1- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Oct-22-18 13:15	Oct-22-18 13:20	Oct-22-18 13:25	Oct-22-18 13:30	Oct-22-18 13:35	Oct-22-18 13:40
BTEX by EPA 8021B	<i>Extracted:</i>	Oct-25-18 17:00	Oct-25-18 17:00	Oct-25-18 17:00	Oct-25-18 17:00	Oct-25-18 17:00	Oct-25-18 17:00
	<i>Analyzed:</i>	Oct-26-18 00:37	Oct-26-18 00:57	Oct-26-18 01:18	Oct-26-18 01:38	Oct-26-18 01:58	Oct-26-18 02:19
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
Toluene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
m,p-Xylenes		<0.00400 0.00400	<0.00400 0.00400	<0.00400 0.00400	<0.00400 0.00400	<0.00400 0.00400	<0.00400 0.00400
o-Xylene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
Total Xylenes		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
Total BTEX		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
Inorganic Anions by EPA 300	<i>Extracted:</i>	Oct-25-18 15:30	Oct-25-18 15:30	Oct-25-18 15:30	Oct-25-18 15:30	Oct-25-18 15:30	Oct-25-18 15:30
	<i>Analyzed:</i>	Oct-25-18 21:26	Oct-25-18 21:31	Oct-25-18 21:47	Oct-25-18 21:52	Oct-25-18 21:10	Oct-25-18 21:57
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		182 4.96	316 5.01	<4.96 4.96	110 4.96	399 4.99	363 4.98
TPH by SW8015 Mod	<i>Extracted:</i>	Oct-26-18 11:00	Oct-26-18 11:00	Oct-26-18 11:00	Oct-26-18 11:00	Oct-26-18 11:00	Oct-26-18 11:00
	<i>Analyzed:</i>	Oct-26-18 16:53	Oct-26-18 17:49	Oct-26-18 18:08	Oct-26-18 18:27	Oct-26-18 18:46	Oct-26-18 19:05
	<i>Units/RL:</i>	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	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Diesel Range Organics (DRO)		<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Total TPH		<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0

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

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Version: 1.9%

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 603513

LT Environmental, Inc., Arvada, CO

Project Name: Nash Draw #8 Federal

Project Id:

Contact: Adrian Baker

Project Location: Carlsbad, NM

Date Received in Lab: Thu Oct-25-18 11:35 am

Report Date: 30-OCT-18

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	603513-007	603513-008	603513-009	603513-010	603513-011	603513-012
	<i>Field Id:</i>	SS43	SS44	SS45	SS46	SS47	SS48
	<i>Depth:</i>	1- ft	1- ft	1- ft	1- ft	1- ft	1- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Oct-22-18 13:45	Oct-22-18 13:50	Oct-22-18 14:00	Oct-22-18 14:10	Oct-22-18 14:20	Oct-22-18 14:25
BTEX by EPA 8021B	<i>Extracted:</i>	Oct-26-18 18:00	Oct-26-18 18:00	Oct-26-18 18:00	Oct-26-18 18:00	Oct-26-18 18:00	Oct-26-18 18:00
	<i>Analyzed:</i>	Oct-26-18 22:14	Oct-26-18 22:35	Oct-26-18 22:55	Oct-26-18 23:15	Oct-26-18 23:36	Oct-26-18 23:56
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
Toluene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
m,p-Xylenes		<0.00400 0.00400	<0.00400 0.00400	<0.00400 0.00400	<0.00400 0.00400	<0.00400 0.00400	<0.00400 0.00400
o-Xylene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
Total Xylenes		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
Total BTEX		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
Inorganic Anions by EPA 300	<i>Extracted:</i>	Oct-25-18 15:30	Oct-25-18 15:30	Oct-25-18 15:30	Oct-25-18 15:30	Oct-26-18 10:30	Oct-26-18 10:30
	<i>Analyzed:</i>	Oct-25-18 22:03	Oct-25-18 22:08	Oct-25-18 22:13	Oct-25-18 22:19	Oct-26-18 11:49	Oct-26-18 12:05
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		313 4.95	166 4.95	107 4.95	568 4.95	242 4.96	131 4.95
TPH by SW8015 Mod	<i>Extracted:</i>	Oct-26-18 11:00	Oct-26-18 11:00	Oct-26-18 11:00	Oct-26-18 11:00	Oct-26-18 11:00	Oct-26-18 11:00
	<i>Analyzed:</i>	Oct-26-18 19:24	Oct-26-18 19:42	Oct-26-18 20:01	Oct-26-18 20:20	Oct-26-18 21:16	Oct-26-18 21:34
	<i>Units/RL:</i>	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	<14.9 14.9	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0
Diesel Range Organics (DRO)		<15.0 15.0	<14.9 14.9	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<14.9 14.9	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0
Total TPH		<15.0 15.0	<14.9 14.9	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0

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Version: 1.9%

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 603513

LT Environmental, Inc., Arvada, CO

Project Name: Nash Draw #8 Federal

Project Id:

Contact: Adrian Baker

Project Location: Carlsbad, NM

Date Received in Lab: Thu Oct-25-18 11:35 am

Report Date: 30-OCT-18

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	603513-013	603513-014	603513-015	603513-016	603513-017	603513-018
	<i>Field Id:</i>	SS49	SS50	SS51	SS52	SS53	SS54
	<i>Depth:</i>	1- ft	1- ft	1- ft	1- ft	1- ft	1- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Oct-22-18 14:30	Oct-22-18 14:40	Oct-22-18 14:45	Oct-22-18 14:50	Oct-22-18 14:55	Oct-22-18 15:00
BTEX by EPA 8021B	<i>Extracted:</i>	Oct-26-18 18:00	Oct-26-18 18:00	Oct-26-18 18:00	Oct-26-18 18:00	Oct-26-18 18:00	Oct-26-18 18:00
	<i>Analyzed:</i>	Oct-27-18 00:57	Oct-27-18 01:18	Oct-27-18 01:38	Oct-27-18 01:58	Oct-27-18 02:19	Oct-27-18 02:39
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
Toluene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
m,p-Xylenes		<0.00400 0.00400	<0.00400 0.00400	<0.00400 0.00400	<0.00400 0.00400	<0.00400 0.00400	<0.00400 0.00400
o-Xylene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
Total Xylenes		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
Total BTEX		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
Inorganic Anions by EPA 300	<i>Extracted:</i>	Oct-26-18 10:30	Oct-26-18 10:30	Oct-26-18 10:30	Oct-26-18 10:30	Oct-26-18 10:30	Oct-26-18 10:30
	<i>Analyzed:</i>	Oct-26-18 12:10	Oct-26-18 12:15	Oct-26-18 12:20	Oct-26-18 12:36	Oct-26-18 12:42	Oct-26-18 12:47
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		95.1 5.00	102 4.99	95.3 5.03	6.86 4.97	215 4.96	101 5.01
TPH by SW8015 Mod	<i>Extracted:</i>	Oct-26-18 11:00	Oct-26-18 11:00	Oct-26-18 11:00	Oct-26-18 11:00	Oct-26-18 11:00	Oct-26-18 11:00
	<i>Analyzed:</i>	Oct-26-18 21:53	Oct-26-18 22:11	Oct-26-18 22:30	Oct-26-18 22:48	Oct-26-18 23:06	Oct-26-18 23:25
	<i>Units/RL:</i>	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	<14.9 14.9	<15.0 15.0
Diesel Range Organics (DRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0
Total TPH		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0

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Jessica Kramer
Project Assistant



Certificate of Analysis Summary 603513

LT Environmental, Inc., Arvada, CO

Project Name: Nash Draw #8 Federal

Project Id:

Contact: Adrian Baker

Project Location: Carlsbad, NM

Date Received in Lab: Thu Oct-25-18 11:35 am

Report Date: 30-OCT-18

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	603513-019	603513-020	603513-021	603513-022	603513-023	603513-024
	<i>Field Id:</i>	SS55	SS56	SS57	SS58	SS59	SS60
	<i>Depth:</i>	1- ft	1- ft	1- ft	1- ft	1- ft	1- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Oct-22-18 15:10	Oct-22-18 15:12	Oct-22-18 15:15	Oct-22-18 15:17	Oct-22-18 15:20	Oct-22-18 15:25
BTEX by EPA 8021B	<i>Extracted:</i>	Oct-26-18 18:00	Oct-26-18 18:00	Oct-26-18 18:00	Oct-26-18 18:00	Oct-26-18 18:00	Oct-26-18 18:00
	<i>Analyzed:</i>	Oct-27-18 02:59	Oct-27-18 08:43	Oct-27-18 09:04	Oct-27-18 12:04	Oct-27-18 12:25	Oct-27-18 12:45
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
Toluene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
m,p-Xylenes		<0.00400 0.00400	<0.00400 0.00400	<0.00400 0.00400	<0.00400 0.00400	<0.00400 0.00400	<0.00400 0.00400
o-Xylene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
Total Xylenes		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
Total BTEX		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200
Inorganic Anions by EPA 300	<i>Extracted:</i>	Oct-26-18 10:30	Oct-26-18 10:30	Oct-26-18 10:30	Oct-26-18 10:30	Oct-26-18 10:30	Oct-26-18 10:30
	<i>Analyzed:</i>	Oct-26-18 12:52	Oct-26-18 12:58	Oct-26-18 13:03	Oct-26-18 13:19	Oct-26-18 13:24	Oct-26-18 13:40
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		141 4.95	114 4.99	90.7 4.95	114 4.96	58.9 5.02	36.5 5.00
TPH by SW8015 Mod	<i>Extracted:</i>	Oct-26-18 11:00	Oct-26-18 11:00	Oct-26-18 17:00	Oct-26-18 17:00	Oct-26-18 17:00	Oct-26-18 17:00
	<i>Analyzed:</i>	Oct-26-18 23:43	Oct-27-18 00:02	Oct-27-18 13:52	Oct-27-18 14:49	Oct-27-18 15:08	Oct-27-18 15:27
	<i>Units/RL:</i>	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	<15.0 15.0	<15.0 15.0
Diesel Range Organics (DRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Total TPH		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0

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Jessica Kramer
Project Assistant



Certificate of Analysis Summary 603513

LT Environmental, Inc., Arvada, CO

Project Name: Nash Draw #8 Federal

Project Id:

Contact: Adrian Baker

Project Location: Carlsbad, NM

Date Received in Lab: Thu Oct-25-18 11:35 am

Report Date: 30-OCT-18

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	603513-025	603513-026				
	Field Id:	SS61	SS62				
	Depth:	1- ft	1- ft				
	Matrix:	SOIL	SOIL				
	Sampled:	Oct-22-18 15:30	Oct-22-18 15:40				
BTEX by EPA 8021B	Extracted:	Oct-26-18 18:00	Oct-26-18 18:00				
	Analyzed:	Oct-27-18 13:05	Oct-27-18 13:26				
	Units/RL:	mg/kg RL	mg/kg RL				
Benzene		<0.00200 0.00200	<0.00200 0.00200				
Toluene		<0.00200 0.00200	<0.00200 0.00200				
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200				
m,p-Xylenes		<0.00400 0.00400	<0.00400 0.00400				
o-Xylene		<0.00200 0.00200	<0.00200 0.00200				
Total Xylenes		<0.00200 0.00200	<0.00200 0.00200				
Total BTEX		<0.00200 0.00200	<0.00200 0.00200				
Inorganic Anions by EPA 300	Extracted:	Oct-26-18 10:30	Oct-26-18 10:30				
	Analyzed:	Oct-26-18 13:45	Oct-26-18 13:51				
	Units/RL:	mg/kg RL	mg/kg RL				
Chloride		<4.95 4.95	6.46 5.03				
TPH by SW8015 Mod	Extracted:	Oct-26-18 17:00	Oct-26-18 17:00				
	Analyzed:	Oct-27-18 15:46	Oct-27-18 16:04				
	Units/RL:	mg/kg RL	mg/kg RL				
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	<15.0 15.0				
Diesel Range Organics (DRO)		<15.0 15.0	<15.0 15.0				
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0				
Total TPH		<15.0 15.0	<15.0 15.0				

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Version: 1.0%

Jessica Kramer
Project Assistant



Certificate of Analytical Results 603513

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: SS37
Lab Sample Id: 603513-001

Matrix: Soil
Date Collected: 10.22.18 13.15

Date Received: 10.25.18 11.35
Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3067618

Date Prep: 10.25.18 15.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	182	4.96	mg/kg	10.25.18 21.26		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3067856

Date Prep: 10.26.18 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.26.18 16.53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.26.18 16.53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.26.18 16.53	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.26.18 16.53	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	100	%	70-135	10.26.18 16.53		
o-Terphenyl	84-15-1	100	%	70-135	10.26.18 16.53		



Certificate of Analytical Results 603513



LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: SS37
Lab Sample Id: 603513-001

Matrix: Soil
Date Collected: 10.22.18 13.15

Date Received: 10.25.18 11.35
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: JUM

% Moisture:

Analyst: JUM

Date Prep: 10.25.18 17.00

Basis: Wet Weight

Seq Number: 3067712

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.26.18 00.37	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.26.18 00.37	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.26.18 00.37	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	10.26.18 00.37	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.26.18 00.37	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.26.18 00.37	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.26.18 00.37	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	84	%	70-130	10.26.18 00.37		
1,4-Difluorobenzene	540-36-3	109	%	70-130	10.26.18 00.37		



Certificate of Analytical Results 603513

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **SS38**
 Lab Sample Id: 603513-002

Matrix: Soil
 Date Collected: 10.22.18 13.20

Date Received: 10.25.18 11.35
 Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3067618

Date Prep: 10.25.18 15.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	316	5.01	mg/kg	10.25.18 21.31		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3067856

Date Prep: 10.26.18 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	10.26.18 17.49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	10.26.18 17.49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	10.26.18 17.49	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	10.26.18 17.49	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	96	%	70-135	10.26.18 17.49		
o-Terphenyl	84-15-1	97	%	70-135	10.26.18 17.49		



Certificate of Analytical Results 603513

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **SS38**
 Lab Sample Id: 603513-002

Matrix: Soil
 Date Collected: 10.22.18 13.20

Date Received: 10.25.18 11.35
 Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: JUM

% Moisture:

Analyst: JUM

Date Prep: 10.25.18 17.00

Basis: Wet Weight

Seq Number: 3067712

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.26.18 00.57	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.26.18 00.57	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.26.18 00.57	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	10.26.18 00.57	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.26.18 00.57	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.26.18 00.57	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.26.18 00.57	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	84	%	70-130	10.26.18 00.57		
1,4-Difluorobenzene	540-36-3	110	%	70-130	10.26.18 00.57		



Certificate of Analytical Results 603513

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **SS39** Matrix: Soil Date Received: 10.25.18 11.35
 Lab Sample Id: 603513-003 Date Collected: 10.22.18 13.25 Sample Depth: 1 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 10.25.18 15.30 Basis: Wet Weight
 Seq Number: 3067618

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.96	4.96	mg/kg	10.25.18 21.47	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 10.26.18 11.00 Basis: Wet Weight
 Seq Number: 3067856

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.26.18 18.08	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.26.18 18.08	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.26.18 18.08	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.26.18 18.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	10.26.18 18.08	
o-Terphenyl	84-15-1	100	%	70-135	10.26.18 18.08	



Certificate of Analytical Results 603513



LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **SS39**
 Lab Sample Id: 603513-003

Matrix: Soil
 Date Collected: 10.22.18 13.25

Date Received: 10.25.18 11.35
 Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: JUM

% Moisture:

Analyst: JUM

Date Prep: 10.25.18 17.00

Basis: Wet Weight

Seq Number: 3067712

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.26.18 01.18	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.26.18 01.18	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.26.18 01.18	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	10.26.18 01.18	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.26.18 01.18	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.26.18 01.18	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.26.18 01.18	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	111	%	70-130	10.26.18 01.18		
4-Bromofluorobenzene	460-00-4	89	%	70-130	10.26.18 01.18		



Certificate of Analytical Results 603513

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **SS40**
 Lab Sample Id: 603513-004

Matrix: Soil
 Date Collected: 10.22.18 13.30

Date Received: 10.25.18 11.35
 Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3067618

Date Prep: 10.25.18 15.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	110	4.96	mg/kg	10.25.18 21.52		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3067856

Date Prep: 10.26.18 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.26.18 18.27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.26.18 18.27	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.26.18 18.27	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.26.18 18.27	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	94	%	70-135	10.26.18 18.27		
o-Terphenyl	84-15-1	95	%	70-135	10.26.18 18.27		



Certificate of Analytical Results 603513

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **SS40**
 Lab Sample Id: 603513-004

Matrix: Soil
 Date Collected: 10.22.18 13.30

Date Received: 10.25.18 11.35
 Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: JUM

% Moisture:

Analyst: JUM

Date Prep: 10.25.18 17.00

Basis: Wet Weight

Seq Number: 3067712

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.26.18 01.38	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.26.18 01.38	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.26.18 01.38	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	10.26.18 01.38	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.26.18 01.38	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.26.18 01.38	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.26.18 01.38	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	111	%	70-130	10.26.18 01.38		
4-Bromofluorobenzene	460-00-4	92	%	70-130	10.26.18 01.38		



Certificate of Analytical Results 603513

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **SS41** Matrix: Soil Date Received: 10.25.18 11.35
 Lab Sample Id: 603513-005 Date Collected: 10.22.18 13.35 Sample Depth: 1 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 10.25.18 15.30 Basis: Wet Weight
 Seq Number: 3067618

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	399	4.99	mg/kg	10.25.18 21.10		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 10.26.18 11.00 Basis: Wet Weight
 Seq Number: 3067856

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.26.18 18.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.26.18 18.46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.26.18 18.46	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.26.18 18.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	10.26.18 18.46	
o-Terphenyl	84-15-1	97	%	70-135	10.26.18 18.46	



Certificate of Analytical Results 603513



LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **SS41**
 Lab Sample Id: 603513-005

Matrix: Soil
 Date Collected: 10.22.18 13.35

Date Received: 10.25.18 11.35
 Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: JUM

% Moisture:

Analyst: JUM

Date Prep: 10.25.18 17.00

Basis: Wet Weight

Seq Number: 3067712

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.26.18 01.58	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.26.18 01.58	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.26.18 01.58	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	10.26.18 01.58	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.26.18 01.58	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.26.18 01.58	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.26.18 01.58	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	109	%	70-130	10.26.18 01.58		
4-Bromofluorobenzene	460-00-4	82	%	70-130	10.26.18 01.58		



Certificate of Analytical Results 603513

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: SS42 Matrix: Soil Date Received: 10.25.18 11.35
 Lab Sample Id: 603513-006 Date Collected: 10.22.18 13.40 Sample Depth: 1 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 10.25.18 15.30 Basis: Wet Weight
 Seq Number: 3067618

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	363	4.98	mg/kg	10.25.18 21.57		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 10.26.18 11.00 Basis: Wet Weight
 Seq Number: 3067856

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.26.18 19.05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.26.18 19.05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.26.18 19.05	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.26.18 19.05	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	90	%	70-135	10.26.18 19.05		
o-Terphenyl	84-15-1	92	%	70-135	10.26.18 19.05		



Certificate of Analytical Results 603513

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: SS42
 Lab Sample Id: 603513-006

Matrix: Soil
 Date Collected: 10.22.18 13.40

Date Received: 10.25.18 11.35
 Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: JUM

% Moisture:

Analyst: JUM

Date Prep: 10.25.18 17.00

Basis: Wet Weight

Seq Number: 3067712

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.26.18 02.19	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.26.18 02.19	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.26.18 02.19	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	10.26.18 02.19	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.26.18 02.19	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.26.18 02.19	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.26.18 02.19	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	85	%	70-130	10.26.18 02.19		
1,4-Difluorobenzene	540-36-3	108	%	70-130	10.26.18 02.19		



Certificate of Analytical Results 603513

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **SS43** Matrix: **Soil** Date Received: 10.25.18 11.35
 Lab Sample Id: 603513-007 Date Collected: 10.22.18 13.45 Sample Depth: 1 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: **CHE** % Moisture:
 Analyst: **CHE** Date Prep: 10.25.18 15.30 Basis: **Wet Weight**
 Seq Number: 3067618

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	313	4.95	mg/kg	10.25.18 22.03		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: **ARM** % Moisture:
 Analyst: **ARM** Date Prep: 10.26.18 11.00 Basis: **Wet Weight**
 Seq Number: 3067856

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.26.18 19.24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.26.18 19.24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.26.18 19.24	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.26.18 19.24	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	92	%	70-135	10.26.18 19.24		
o-Terphenyl	84-15-1	94	%	70-135	10.26.18 19.24		



Certificate of Analytical Results 603513

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **SS43**
 Lab Sample Id: 603513-007

Matrix: Soil
 Date Collected: 10.22.18 13.45

Date Received: 10.25.18 11.35
 Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: JUM

% Moisture:

Analyst: JUM

Date Prep: 10.26.18 18.00

Basis: Wet Weight

Seq Number: 3067791

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.26.18 22.14	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.26.18 22.14	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.26.18 22.14	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	10.26.18 22.14	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.26.18 22.14	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.26.18 22.14	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.26.18 22.14	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	107	%	70-130	10.26.18 22.14		
4-Bromofluorobenzene	460-00-4	85	%	70-130	10.26.18 22.14		



Certificate of Analytical Results 603513

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **SS44**
 Lab Sample Id: 603513-008

Matrix: Soil
 Date Collected: 10.22.18 13.50

Date Received: 10.25.18 11.35
 Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3067618

Date Prep: 10.25.18 15.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	166	4.95	mg/kg	10.25.18 22.08		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3067856

Date Prep: 10.26.18 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	10.26.18 19.42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	10.26.18 19.42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	10.26.18 19.42	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	10.26.18 19.42	U	1

Surrogate

1-Chlorooctane

o-Terphenyl

Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
111-85-3	94	%	70-135	10.26.18 19.42	
84-15-1	96	%	70-135	10.26.18 19.42	



Certificate of Analytical Results 603513



LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **SS44**
 Lab Sample Id: 603513-008

Matrix: Soil
 Date Collected: 10.22.18 13.50

Date Received: 10.25.18 11.35
 Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: JUM

% Moisture:

Analyst: JUM

Date Prep: 10.26.18 18.00

Basis: Wet Weight

Seq Number: 3067791

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.26.18 22.35	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.26.18 22.35	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.26.18 22.35	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	10.26.18 22.35	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.26.18 22.35	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.26.18 22.35	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.26.18 22.35	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	75	%	70-130	10.26.18 22.35		
1,4-Difluorobenzene	540-36-3	108	%	70-130	10.26.18 22.35		



Certificate of Analytical Results 603513

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: SS45
Lab Sample Id: 603513-009

Matrix: Soil
Date Collected: 10.22.18 14.00

Date Received: 10.25.18 11.35
Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3067618

Date Prep: 10.25.18 15.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	107	4.95	mg/kg	10.25.18 22.13		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3067856

Date Prep: 10.26.18 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	10.26.18 20.01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	10.26.18 20.01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	10.26.18 20.01	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	10.26.18 20.01	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	95	%	70-135	10.26.18 20.01		
o-Terphenyl	84-15-1	95	%	70-135	10.26.18 20.01		



Certificate of Analytical Results 603513



LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: SS45
Lab Sample Id: 603513-009

Matrix: Soil
Date Collected: 10.22.18 14.00

Date Received: 10.25.18 11.35
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: JUM

% Moisture:

Analyst: JUM

Date Prep: 10.26.18 18.00

Basis: Wet Weight

Seq Number: 3067791

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.26.18 22.55	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.26.18 22.55	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.26.18 22.55	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	10.26.18 22.55	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.26.18 22.55	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.26.18 22.55	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.26.18 22.55	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	83	%	70-130	10.26.18 22.55		
1,4-Difluorobenzene	540-36-3	109	%	70-130	10.26.18 22.55		



Certificate of Analytical Results 603513

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **SS46** Matrix: Soil Date Received: 10.25.18 11.35
 Lab Sample Id: 603513-010 Date Collected: 10.22.18 14.10 Sample Depth: 1 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 10.25.18 15.30 Basis: Wet Weight
 Seq Number: 3067618

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	568	4.95	mg/kg	10.25.18 22.19		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 10.26.18 11.00 Basis: Wet Weight
 Seq Number: 3067856

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.26.18 20.20	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.26.18 20.20	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.26.18 20.20	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.26.18 20.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	10.26.18 20.20	
o-Terphenyl	84-15-1	96	%	70-135	10.26.18 20.20	



Certificate of Analytical Results 603513

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **SS46**
 Lab Sample Id: 603513-010

Matrix: Soil
 Date Collected: 10.22.18 14.10

Date Received: 10.25.18 11.35
 Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: JUM

% Moisture:

Analyst: JUM

Date Prep: 10.26.18 18.00

Basis: Wet Weight

Seq Number: 3067791

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.26.18 23.15	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.26.18 23.15	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.26.18 23.15	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	10.26.18 23.15	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.26.18 23.15	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.26.18 23.15	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.26.18 23.15	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	108	%	70-130	10.26.18 23.15		
4-Bromofluorobenzene	460-00-4	84	%	70-130	10.26.18 23.15		



Certificate of Analytical Results 603513

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: SS47
Lab Sample Id: 603513-011

Matrix: Soil
Date Collected: 10.22.18 14.20

Date Received: 10.25.18 11.35
Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3067773

Date Prep: 10.26.18 10.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	242	4.96	mg/kg	10.26.18 11.49		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3067856

Date Prep: 10.26.18 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.26.18 21.16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.26.18 21.16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.26.18 21.16	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.26.18 21.16	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	96	%	70-135	10.26.18 21.16		
o-Terphenyl	84-15-1	98	%	70-135	10.26.18 21.16		



Certificate of Analytical Results 603513

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: SS47
 Lab Sample Id: 603513-011

Matrix: Soil
 Date Collected: 10.22.18 14.20

Date Received: 10.25.18 11.35
 Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: JUM

% Moisture:

Analyst: JUM

Date Prep: 10.26.18 18.00

Basis: Wet Weight

Seq Number: 3067791

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.26.18 23.36	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.26.18 23.36	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.26.18 23.36	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	10.26.18 23.36	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.26.18 23.36	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.26.18 23.36	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.26.18 23.36	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	105	%	70-130	10.26.18 23.36		
4-Bromofluorobenzene	460-00-4	77	%	70-130	10.26.18 23.36		



Certificate of Analytical Results 603513

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **SS48**
 Lab Sample Id: 603513-012

Matrix: Soil
 Date Collected: 10.22.18 14.25

Date Received: 10.25.18 11.35
 Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3067773

Date Prep: 10.26.18 10.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	131	4.95	mg/kg	10.26.18 12.05		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3067856

Date Prep: 10.26.18 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.26.18 21.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.26.18 21.34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.26.18 21.34	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.26.18 21.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	10.26.18 21.34	
o-Terphenyl	84-15-1	98	%	70-135	10.26.18 21.34	



Certificate of Analytical Results 603513



LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **SS48**
Lab Sample Id: 603513-012

Matrix: Soil
Date Collected: 10.22.18 14.25

Date Received: 10.25.18 11.35
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: JUM

% Moisture:

Analyst: JUM

Date Prep: 10.26.18 18.00

Basis: Wet Weight

Seq Number: 3067791

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.26.18 23.56	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.26.18 23.56	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.26.18 23.56	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	10.26.18 23.56	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.26.18 23.56	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.26.18 23.56	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.26.18 23.56	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	104	%	70-130	10.26.18 23.56		
4-Bromofluorobenzene	460-00-4	85	%	70-130	10.26.18 23.56		



Certificate of Analytical Results 603513

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **SS49** Matrix: Soil Date Received: 10.25.18 11.35
 Lab Sample Id: 603513-013 Date Collected: 10.22.18 14.30 Sample Depth: 1 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 10.26.18 10.30 Basis: Wet Weight
 Seq Number: 3067773

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	95.1	5.00	mg/kg	10.26.18 12.10		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 10.26.18 11.00 Basis: Wet Weight
 Seq Number: 3067856

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.26.18 21.53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.26.18 21.53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.26.18 21.53	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.26.18 21.53	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	97	%	70-135	10.26.18 21.53		
o-Terphenyl	84-15-1	100	%	70-135	10.26.18 21.53		



Certificate of Analytical Results 603513

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **SS49**
 Lab Sample Id: 603513-013

Matrix: Soil
 Date Collected: 10.22.18 14.30

Date Received: 10.25.18 11.35
 Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: JUM

% Moisture:

Analyst: JUM

Date Prep: 10.26.18 18.00

Basis: Wet Weight

Seq Number: 3067791

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.27.18 00.57	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.27.18 00.57	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.27.18 00.57	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	10.27.18 00.57	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.27.18 00.57	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.27.18 00.57	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.27.18 00.57	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	93	%	70-130	10.27.18 00.57		
1,4-Difluorobenzene	540-36-3	112	%	70-130	10.27.18 00.57		



Certificate of Analytical Results 603513

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: SS50
Lab Sample Id: 603513-014

Matrix: Soil
Date Collected: 10.22.18 14.40

Date Received: 10.25.18 11.35
Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3067773

Date Prep: 10.26.18 10.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	102	4.99	mg/kg	10.26.18 12.15		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3067856

Date Prep: 10.26.18 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.26.18 22.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.26.18 22.11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.26.18 22.11	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.26.18 22.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	10.26.18 22.11	
o-Terphenyl	84-15-1	98	%	70-135	10.26.18 22.11	



Certificate of Analytical Results 603513

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **SS50**
 Lab Sample Id: 603513-014

Matrix: Soil
 Date Collected: 10.22.18 14.40

Date Received: 10.25.18 11.35
 Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: JUM

% Moisture:

Analyst: JUM

Date Prep: 10.26.18 18.00

Basis: Wet Weight

Seq Number: 3067791

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.27.18 01.18	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.27.18 01.18	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.27.18 01.18	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	10.27.18 01.18	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.27.18 01.18	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.27.18 01.18	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.27.18 01.18	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	73	%	70-130	10.27.18 01.18		
1,4-Difluorobenzene	540-36-3	108	%	70-130	10.27.18 01.18		



Certificate of Analytical Results 603513

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **SS51** Matrix: **Soil** Date Received: 10.25.18 11.35
 Lab Sample Id: 603513-015 Date Collected: 10.22.18 14.45 Sample Depth: 1 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: **CHE** % Moisture:
 Analyst: **CHE** Date Prep: 10.26.18 10.30 Basis: **Wet Weight**
 Seq Number: 3067773

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	95.3	5.03	mg/kg	10.26.18 12.20		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: **ARM** % Moisture:
 Analyst: **ARM** Date Prep: 10.26.18 11.00 Basis: **Wet Weight**
 Seq Number: 3067856

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.26.18 22.30	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.26.18 22.30	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.26.18 22.30	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.26.18 22.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	10.26.18 22.30	
o-Terphenyl	84-15-1	97	%	70-135	10.26.18 22.30	



Certificate of Analytical Results 603513

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: SS51
 Lab Sample Id: 603513-015

Matrix: Soil
 Date Collected: 10.22.18 14.45

Date Received: 10.25.18 11.35
 Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: JUM

% Moisture:

Analyst: JUM

Date Prep: 10.26.18 18.00

Basis: Wet Weight

Seq Number: 3067791

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.27.18 01.38	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.27.18 01.38	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.27.18 01.38	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	10.27.18 01.38	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.27.18 01.38	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.27.18 01.38	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.27.18 01.38	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	115	%	70-130	10.27.18 01.38		
4-Bromofluorobenzene	460-00-4	106	%	70-130	10.27.18 01.38		



Certificate of Analytical Results 603513

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: SS52 Matrix: Soil Date Received: 10.25.18 11.35
 Lab Sample Id: 603513-016 Date Collected: 10.22.18 14.50 Sample Depth: 1 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 10.26.18 10.30 Basis: Wet Weight
 Seq Number: 3067773

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	6.86	4.97	mg/kg	10.26.18 12.36		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 10.26.18 11.00 Basis: Wet Weight
 Seq Number: 3067856

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.26.18 22.48	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.26.18 22.48	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.26.18 22.48	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.26.18 22.48	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	97	%	70-135	10.26.18 22.48		
o-Terphenyl	84-15-1	99	%	70-135	10.26.18 22.48		



Certificate of Analytical Results 603513



LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: SS52
Lab Sample Id: 603513-016

Matrix: Soil
Date Collected: 10.22.18 14.50

Date Received: 10.25.18 11.35
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: JUM

% Moisture:

Analyst: JUM

Date Prep: 10.26.18 18.00

Basis: Wet Weight

Seq Number: 3067791

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.27.18 01.58	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.27.18 01.58	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.27.18 01.58	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	10.27.18 01.58	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.27.18 01.58	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.27.18 01.58	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.27.18 01.58	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	110	%	70-130	10.27.18 01.58		
4-Bromofluorobenzene	460-00-4	83	%	70-130	10.27.18 01.58		



Certificate of Analytical Results 603513

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: SS53
Lab Sample Id: 603513-017

Matrix: Soil
Date Collected: 10.22.18 14.55

Date Received: 10.25.18 11.35
Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3067773

Date Prep: 10.26.18 10.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	215	4.96	mg/kg	10.26.18 12.42		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3067856

Date Prep: 10.26.18 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	10.26.18 23.06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	10.26.18 23.06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	10.26.18 23.06	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	10.26.18 23.06	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	96	%	70-135	10.26.18 23.06		
o-Terphenyl	84-15-1	98	%	70-135	10.26.18 23.06		



Certificate of Analytical Results 603513

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: SS53
 Lab Sample Id: 603513-017

Matrix: Soil
 Date Collected: 10.22.18 14.55

Date Received: 10.25.18 11.35
 Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: JUM

% Moisture:

Analyst: JUM

Date Prep: 10.26.18 18.00

Basis: Wet Weight

Seq Number: 3067791

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.27.18 02.19	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.27.18 02.19	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.27.18 02.19	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	10.27.18 02.19	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.27.18 02.19	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.27.18 02.19	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.27.18 02.19	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	113	%	70-130	10.27.18 02.19		
4-Bromofluorobenzene	460-00-4	90	%	70-130	10.27.18 02.19		



Certificate of Analytical Results 603513

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: SS54
Lab Sample Id: 603513-018

Matrix: Soil
Date Collected: 10.22.18 15.00

Date Received: 10.25.18 11.35
Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3067773

Date Prep: 10.26.18 10.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	101	5.01	mg/kg	10.26.18 12.47		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3067856

Date Prep: 10.26.18 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.26.18 23.25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.26.18 23.25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.26.18 23.25	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.26.18 23.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	10.26.18 23.25	
o-Terphenyl	84-15-1	99	%	70-135	10.26.18 23.25	



Certificate of Analytical Results 603513



LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: SS54
Lab Sample Id: 603513-018

Matrix: Soil
Date Collected: 10.22.18 15.00

Date Received: 10.25.18 11.35
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: JUM

% Moisture:

Analyst: JUM

Date Prep: 10.26.18 18.00

Basis: Wet Weight

Seq Number: 3067791

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.27.18 02.39	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.27.18 02.39	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.27.18 02.39	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	10.27.18 02.39	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.27.18 02.39	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.27.18 02.39	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.27.18 02.39	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	107	%	70-130	10.27.18 02.39		
4-Bromofluorobenzene	460-00-4	89	%	70-130	10.27.18 02.39		



Certificate of Analytical Results 603513

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: SS55 Matrix: Soil Date Received: 10.25.18 11.35
 Lab Sample Id: 603513-019 Date Collected: 10.22.18 15.10 Sample Depth: 1 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 10.26.18 10.30 Basis: Wet Weight
 Seq Number: 3067773

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	141	4.95	mg/kg	10.26.18 12.52		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 10.26.18 11.00 Basis: Wet Weight
 Seq Number: 3067856

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.26.18 23.43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.26.18 23.43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.26.18 23.43	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.26.18 23.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	10.26.18 23.43	
o-Terphenyl	84-15-1	94	%	70-135	10.26.18 23.43	



Certificate of Analytical Results 603513

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: SS55
 Lab Sample Id: 603513-019

Matrix: Soil
 Date Collected: 10.22.18 15.10

Date Received: 10.25.18 11.35
 Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: JUM

% Moisture:

Analyst: JUM

Date Prep: 10.26.18 18.00

Basis: Wet Weight

Seq Number: 3067791

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.27.18 02.59	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.27.18 02.59	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.27.18 02.59	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	10.27.18 02.59	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.27.18 02.59	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.27.18 02.59	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.27.18 02.59	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	81	%	70-130	10.27.18 02.59		
1,4-Difluorobenzene	540-36-3	107	%	70-130	10.27.18 02.59		



Certificate of Analytical Results 603513

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: SS56
Lab Sample Id: 603513-020

Matrix: Soil
Date Collected: 10.22.18 15.12

Date Received: 10.25.18 11.35
Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3067773

Date Prep: 10.26.18 10.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	114	4.99	mg/kg	10.26.18 12.58		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3067856

Date Prep: 10.26.18 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.27.18 00.02	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.27.18 00.02	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.27.18 00.02	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.27.18 00.02	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	96	%	70-135	10.27.18 00.02		
o-Terphenyl	84-15-1	98	%	70-135	10.27.18 00.02		



Certificate of Analytical Results 603513

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: SS56
 Lab Sample Id: 603513-020

Matrix: Soil
 Date Collected: 10.22.18 15.12

Date Received: 10.25.18 11.35
 Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: JUM

% Moisture:

Analyst: JUM

Date Prep: 10.26.18 18.00

Basis: Wet Weight

Seq Number: 3067791

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.27.18 08.43	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.27.18 08.43	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.27.18 08.43	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	10.27.18 08.43	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.27.18 08.43	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.27.18 08.43	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.27.18 08.43	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	127	%	70-130	10.27.18 08.43		
1,4-Difluorobenzene	540-36-3	115	%	70-130	10.27.18 08.43		



Certificate of Analytical Results 603513

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: SS57 Matrix: Soil Date Received: 10.25.18 11.35
 Lab Sample Id: 603513-021 Date Collected: 10.22.18 15.15 Sample Depth: 1 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 10.26.18 10.30 Basis: Wet Weight
 Seq Number: 3067773

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	90.7	4.95	mg/kg	10.26.18 13.03		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 10.26.18 17.00 Basis: Wet Weight
 Seq Number: 3067861

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.27.18 13.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.27.18 13.52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.27.18 13.52	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.27.18 13.52	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	88	%	70-135	10.27.18 13.52		
o-Terphenyl	84-15-1	90	%	70-135	10.27.18 13.52		



Certificate of Analytical Results 603513

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: SS57
 Lab Sample Id: 603513-021

Matrix: Soil
 Date Collected: 10.22.18 15.15

Date Received: 10.25.18 11.35
 Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: JUM

% Moisture:

Analyst: JUM

Date Prep: 10.26.18 18.00

Basis: Wet Weight

Seq Number: 3067791

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.27.18 09.04	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.27.18 09.04	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.27.18 09.04	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	10.27.18 09.04	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.27.18 09.04	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.27.18 09.04	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.27.18 09.04	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	108	%	70-130	10.27.18 09.04		
4-Bromofluorobenzene	460-00-4	82	%	70-130	10.27.18 09.04		



Certificate of Analytical Results 603513

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: SS58
Lab Sample Id: 603513-022

Matrix: Soil
Date Collected: 10.22.18 15.17

Date Received: 10.25.18 11.35
Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3067773

Date Prep: 10.26.18 10.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	114	4.96	mg/kg	10.26.18 13.19		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3067861

Date Prep: 10.26.18 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.27.18 14.49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.27.18 14.49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.27.18 14.49	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.27.18 14.49	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	88	%	70-135	10.27.18 14.49		
o-Terphenyl	84-15-1	92	%	70-135	10.27.18 14.49		



Certificate of Analytical Results 603513

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **SS58**
 Lab Sample Id: 603513-022

Matrix: Soil
 Date Collected: 10.22.18 15.17

Date Received: 10.25.18 11.35
 Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: JUM

% Moisture:

Analyst: JUM

Date Prep: 10.26.18 18.00

Basis: Wet Weight

Seq Number: 3067839

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.27.18 12.04	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.27.18 12.04	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.27.18 12.04	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	10.27.18 12.04	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.27.18 12.04	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.27.18 12.04	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.27.18 12.04	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	100	%	70-130	10.27.18 12.04		
4-Bromofluorobenzene	460-00-4	79	%	70-130	10.27.18 12.04		



Certificate of Analytical Results 603513

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: SS59
Lab Sample Id: 603513-023

Matrix: Soil
Date Collected: 10.22.18 15.20

Date Received: 10.25.18 11.35
Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3067773

Date Prep: 10.26.18 10.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	58.9	5.02	mg/kg	10.26.18 13.24		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3067861

Date Prep: 10.26.18 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.27.18 15.08	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.27.18 15.08	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.27.18 15.08	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.27.18 15.08	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	89	%	70-135	10.27.18 15.08		
o-Terphenyl	84-15-1	91	%	70-135	10.27.18 15.08		



Certificate of Analytical Results 603513

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: SS59
 Lab Sample Id: 603513-023

Matrix: Soil
 Date Collected: 10.22.18 15.20

Date Received: 10.25.18 11.35
 Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: JUM

% Moisture:

Analyst: JUM

Date Prep: 10.26.18 18.00

Basis: Wet Weight

Seq Number: 3067839

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.27.18 12.25	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.27.18 12.25	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.27.18 12.25	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	10.27.18 12.25	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.27.18 12.25	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.27.18 12.25	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.27.18 12.25	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	109	%	70-130	10.27.18 12.25		
4-Bromofluorobenzene	460-00-4	83	%	70-130	10.27.18 12.25		



Certificate of Analytical Results 603513

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **SS60** Matrix: Soil Date Received: 10.25.18 11.35
 Lab Sample Id: 603513-024 Date Collected: 10.22.18 15.25 Sample Depth: 1 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 10.26.18 10.30 Basis: Wet Weight
 Seq Number: 3067773

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	36.5	5.00	mg/kg	10.26.18 13.40		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 10.26.18 17.00 Basis: Wet Weight
 Seq Number: 3067861

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.27.18 15.27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.27.18 15.27	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.27.18 15.27	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.27.18 15.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	10.27.18 15.27	
o-Terphenyl	84-15-1	96	%	70-135	10.27.18 15.27	



Certificate of Analytical Results 603513

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **SS60**
 Lab Sample Id: 603513-024

Matrix: Soil
 Date Collected: 10.22.18 15.25

Date Received: 10.25.18 11.35
 Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: JUM

% Moisture:

Analyst: JUM

Date Prep: 10.26.18 18.00

Basis: Wet Weight

Seq Number: 3067839

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.27.18 12.45	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.27.18 12.45	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.27.18 12.45	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	10.27.18 12.45	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.27.18 12.45	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.27.18 12.45	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.27.18 12.45	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	99	%	70-130	10.27.18 12.45		
4-Bromofluorobenzene	460-00-4	119	%	70-130	10.27.18 12.45		



Certificate of Analytical Results 603513

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: SS61
Lab Sample Id: 603513-025

Matrix: Soil
Date Collected: 10.22.18 15.30

Date Received: 10.25.18 11.35
Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3067773

Date Prep: 10.26.18 10.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	10.26.18 13.45	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3067861

Date Prep: 10.26.18 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.27.18 15.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.27.18 15.46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.27.18 15.46	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.27.18 15.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	10.27.18 15.46	
o-Terphenyl	84-15-1	95	%	70-135	10.27.18 15.46	



Certificate of Analytical Results 603513



LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: **SS61**
Lab Sample Id: 603513-025

Matrix: Soil
Date Collected: 10.22.18 15.30

Date Received: 10.25.18 11.35
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: JUM

% Moisture:

Analyst: JUM

Date Prep: 10.26.18 18.00

Basis: Wet Weight

Seq Number: 3067839

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.27.18 13.05	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.27.18 13.05	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.27.18 13.05	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	10.27.18 13.05	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.27.18 13.05	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.27.18 13.05	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.27.18 13.05	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	116		%	70-130	10.27.18 13.05	
1,4-Difluorobenzene	540-36-3	111		%	70-130	10.27.18 13.05	



Certificate of Analytical Results 603513

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: SS62
Lab Sample Id: 603513-026

Matrix: Soil
Date Collected: 10.22.18 15.40

Date Received: 10.25.18 11.35
Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3067773

Date Prep: 10.26.18 10.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	6.46	5.03	mg/kg	10.26.18 13.51		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3067861

Date Prep: 10.26.18 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	10.27.18 16.04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.27.18 16.04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.27.18 16.04	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	10.27.18 16.04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	10.27.18 16.04	
o-Terphenyl	84-15-1	86	%	70-135	10.27.18 16.04	



Certificate of Analytical Results 603513



LT Environmental, Inc., Arvada, CO

Nash Draw #8 Federal

Sample Id: SS62
Lab Sample Id: 603513-026

Matrix: Soil
Date Collected: 10.22.18 15.40

Date Received: 10.25.18 11.35
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: JUM

% Moisture:

Analyst: JUM

Date Prep: 10.26.18 18.00

Basis: Wet Weight

Seq Number: 3067839

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.27.18 13.26	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.27.18 13.26	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.27.18 13.26	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	10.27.18 13.26	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.27.18 13.26	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.27.18 13.26	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.27.18 13.26	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	81	%	70-130	10.27.18 13.26		
1,4-Difluorobenzene	540-36-3	112	%	70-130	10.27.18 13.26		



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



LT Environmental, Inc.

Nash Draw #8 Federal

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3067618

MB Sample Id: 7664870-1-BLK

Matrix: Solid

LCS Sample Id: 7664870-1-BKS

Prep Method: E300P

Date Prep: 10.25.18

LCSD Sample Id: 7664870-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	273	109	272	109	90-110	0	20	mg/kg	10.25.18 19:45	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3067773

MB Sample Id: 7664918-1-BLK

Matrix: Solid

LCS Sample Id: 7664918-1-BKS

Prep Method: E300P

Date Prep: 10.26.18

LCSD Sample Id: 7664918-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	264	106	262	105	90-110	1	20	mg/kg	10.26.18 11:38	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3067618

Parent Sample Id: 603430-001

Matrix: Soil

MS Sample Id: 603430-001 S

Prep Method: E300P

Date Prep: 10.25.18

MSD Sample Id: 603430-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.952	277	295	106	297	107	90-110	1	20	mg/kg	10.25.18 20:01	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3067618

Parent Sample Id: 603513-005

Matrix: Soil

MS Sample Id: 603513-005 S

Prep Method: E300P

Date Prep: 10.25.18

MSD Sample Id: 603513-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Chloride	399	250	657	103	656	103	90-110	0	20	mg/kg	10.25.18 21:15	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3067773

Parent Sample Id: 603513-011

Matrix: Soil

MS Sample Id: 603513-011 S

Prep Method: E300P

Date Prep: 10.26.18

MSD Sample Id: 603513-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Chloride	242	248	506	106	507	107	90-110	0	20	mg/kg	10.26.18 11:54	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * | (C - E) / (C + E) |$
 $[D] = 100 * (C) / [B]$
 Log Diff. = $\text{Log}(\text{Sample Duplicate}) - \text{Log}(\text{Original Sample})$

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



LT Environmental, Inc.

Nash Draw #8 Federal

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3067773

Parent Sample Id: 603513-021

Matrix: Soil

MS Sample Id: 603513-021 S

Prep Method: E300P

Date Prep: 10.26.18

MSD Sample Id: 603513-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Chloride	90.7	248	349	104	348	104	90-110	0	20	mg/kg	10.26.18 13:08	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3067856

MB Sample Id: 7665033-1-BLK

Matrix: Solid

LCS Sample Id: 7665033-1-BKS

Prep Method: TX1005P

Date Prep: 10.26.18

LCSD Sample Id: 7665033-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	983	98	934	93	70-135	5	20	mg/kg	10.26.18 16:15	
Diesel Range Organics (DRO)	<8.13	1000	1100	110	1050	105	70-135	5	20	mg/kg	10.26.18 16:15	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	102		123		120		70-135	%	10.26.18 16:15
o-Terphenyl	106		111		108		70-135	%	10.26.18 16:15

Analytical Method: TPH by SW8015 Mod

Seq Number: 3067861

MB Sample Id: 7665037-1-BLK

Matrix: Solid

LCS Sample Id: 7665037-1-BKS

Prep Method: TX1005P

Date Prep: 10.26.18

LCSD Sample Id: 7665037-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	1120	112	1090	109	70-135	3	20	mg/kg	10.27.18 09:53	
Diesel Range Organics (DRO)	<8.13	1000	1140	114	1120	112	70-135	2	20	mg/kg	10.27.18 09:53	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	104		127		128		70-135	%	10.27.18 09:53
o-Terphenyl	112		113		111		70-135	%	10.27.18 09:53

Analytical Method: TPH by SW8015 Mod

Seq Number: 3067856

Parent Sample Id: 603513-001

Matrix: Soil

MS Sample Id: 603513-001 S

Prep Method: TX1005P

Date Prep: 10.26.18

MSD Sample Id: 603513-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<7.99	999	865	87	893	89	70-135	3	20	mg/kg	10.26.18 17:12	
Diesel Range Organics (DRO)	8.45	999	996	99	1010	100	70-135	1	20	mg/kg	10.26.18 17:12	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	124		125		70-135	%	10.26.18 17:12
o-Terphenyl	120		119		70-135	%	10.26.18 17:12

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C-A) / B$
 $RPD = 200 * |(C-E) / (C+E)|$
 $[D] = 100 * (C) / [B]$
 $\text{Log Diff.} = \text{Log}(\text{Sample Duplicate}) - \text{Log}(\text{Original Sample})$

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



LT Environmental, Inc.

Nash Draw #8 Federal

Analytical Method: TPH by SW8015 Mod

Seq Number: 3067861

Parent Sample Id: 603360-001

Matrix: Soil

MS Sample Id: 603360-001 S

Prep Method: TX1005P

Date Prep: 10.26.18

MSD Sample Id: 603360-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	1060	106	1030	103	70-135	3	20	mg/kg	10.27.18 10:47	
Diesel Range Organics (DRO)	<8.13	1000	1110	111	1090	109	70-135	2	20	mg/kg	10.27.18 10:47	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	125		121		70-135	%	10.27.18 10:47
o-Terphenyl	111		106		70-135	%	10.27.18 10:47

Analytical Method: BTEX by EPA 8021B

Seq Number: 3067712

MB Sample Id: 7664946-1-BLK

Matrix: Solid

LCS Sample Id: 7664946-1-BKS

Prep Method: SW5030B

Date Prep: 10.25.18

LCSD Sample Id: 7664946-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0956	96	0.0962	96	70-130	1	35	mg/kg	10.25.18 17:51	
Toluene	<0.00200	0.100	0.0956	96	0.0959	96	70-130	0	35	mg/kg	10.25.18 17:51	
Ethylbenzene	<0.00200	0.100	0.0983	98	0.0985	99	70-130	0	35	mg/kg	10.25.18 17:51	
m,p-Xylenes	<0.00400	0.200	0.188	94	0.190	95	70-130	1	35	mg/kg	10.25.18 17:51	
o-Xylene	<0.00200	0.100	0.0911	91	0.0925	93	70-130	2	35	mg/kg	10.25.18 17:51	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	114		91		95		70-130	%	10.25.18 17:51
4-Bromofluorobenzene	104		89		89		70-130	%	10.25.18 17:51

Analytical Method: BTEX by EPA 8021B

Seq Number: 3067791

MB Sample Id: 7665004-1-BLK

Matrix: Solid

LCS Sample Id: 7665004-1-BKS

Prep Method: SW5030B

Date Prep: 10.26.18

LCSD Sample Id: 7665004-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0937	94	0.0912	91	70-130	3	35	mg/kg	10.26.18 18:53	
Toluene	<0.00200	0.100	0.0957	96	0.0918	92	70-130	4	35	mg/kg	10.26.18 18:53	
Ethylbenzene	<0.00200	0.100	0.101	101	0.0963	96	70-130	5	35	mg/kg	10.26.18 18:53	
m,p-Xylenes	<0.00400	0.200	0.191	96	0.184	92	70-130	4	35	mg/kg	10.26.18 18:53	
o-Xylene	<0.00200	0.100	0.0939	94	0.0916	92	70-130	2	35	mg/kg	10.26.18 18:53	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	116		98		93		70-130	%	10.26.18 18:53
4-Bromofluorobenzene	107		87		93		70-130	%	10.26.18 18:53

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 $\text{Log Diff.} = \text{Log}(\text{Sample Duplicate}) - \text{Log}(\text{Original Sample})$

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



LT Environmental, Inc.

Nash Draw #8 Federal

Analytical Method: BTEX by EPA 8021B

Seq Number: 3067839

MB Sample Id: 7665012-1-BLK

Matrix: Solid

LCS Sample Id: 7665012-1-BKS

Prep Method: SW5030B

Date Prep: 10.26.18

LCSD Sample Id: 7665012-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0874	87	0.0897	90	70-130	3	35	mg/kg	10.27.18 10:04	
Toluene	<0.00200	0.100	0.0912	91	0.0910	91	70-130	0	35	mg/kg	10.27.18 10:04	
Ethylbenzene	<0.00200	0.100	0.0970	97	0.0918	92	70-130	6	35	mg/kg	10.27.18 10:04	
m,p-Xylenes	<0.00400	0.200	0.188	94	0.173	87	70-130	8	35	mg/kg	10.27.18 10:04	
o-Xylene	<0.00200	0.100	0.101	101	0.0899	90	70-130	12	35	mg/kg	10.27.18 10:04	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	114		92		93		70-130	%	10.27.18 10:04
4-Bromofluorobenzene	105		104		96		70-130	%	10.27.18 10:04

Analytical Method: BTEX by EPA 8021B

Seq Number: 3067712

Parent Sample Id: 602545-007

Matrix: Soil

MS Sample Id: 602545-007 S

Prep Method: SW5030B

Date Prep: 10.25.18

MSD Sample Id: 602545-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0775	78	0.0841	84	70-130	8	35	mg/kg	10.25.18 18:31	
Toluene	<0.00200	0.100	0.0789	79	0.0841	84	70-130	6	35	mg/kg	10.25.18 18:31	
Ethylbenzene	<0.00200	0.100	0.0813	81	0.0871	87	70-130	7	35	mg/kg	10.25.18 18:31	
m,p-Xylenes	<0.00400	0.200	0.157	79	0.169	85	70-130	7	35	mg/kg	10.25.18 18:31	
o-Xylene	<0.00200	0.100	0.0773	77	0.0833	83	70-130	7	35	mg/kg	10.25.18 18:31	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	91		94		70-130	%	10.25.18 18:31
4-Bromofluorobenzene	94		94		70-130	%	10.25.18 18:31

Analytical Method: BTEX by EPA 8021B

Seq Number: 3067791

Parent Sample Id: 603426-001

Matrix: Soil

MS Sample Id: 603426-001 S

Prep Method: SW5030B

Date Prep: 10.26.18

MSD Sample Id: 603426-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0750	75	0.0579	58	70-130	26	35	mg/kg	10.26.18 19:33	X
Toluene	<0.00200	0.100	0.0705	71	0.0523	52	70-130	30	35	mg/kg	10.26.18 19:33	X
Ethylbenzene	<0.00200	0.100	0.0647	65	0.0457	46	70-130	34	35	mg/kg	10.26.18 19:33	X
m,p-Xylenes	<0.00400	0.200	0.122	61	0.0871	44	70-130	33	35	mg/kg	10.26.18 19:33	X
o-Xylene	<0.00200	0.100	0.0607	61	0.0437	44	70-130	33	35	mg/kg	10.26.18 19:33	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	94		100		70-130	%	10.26.18 19:33
4-Bromofluorobenzene	94		100		70-130	%	10.26.18 19:33

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C-A) / B$
 $RPD = 200 * |(C-E) / (C+E)|$
 $[D] = 100 * (C) / [B]$
 $\text{Log Diff.} = \text{Log}(\text{Sample Duplicate}) - \text{Log}(\text{Original Sample})$

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



LT Environmental, Inc.

Nash Draw #8 Federal

Analytical Method: BTEX by EPA 8021B

Seq Number: 3067839

Parent Sample Id: 603513-022

Matrix: Soil

MS Sample Id: 603513-022 S

Prep Method: SW5030B

Date Prep: 10.26.18

MSD Sample Id: 603513-022 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0754	75	0.0675	68	70-130	11	35	mg/kg	10.27.18 10:44	X
Toluene	<0.00200	0.100	0.0748	75	0.0680	68	70-130	10	35	mg/kg	10.27.18 10:44	X
Ethylbenzene	<0.00200	0.100	0.0744	74	0.0684	68	70-130	8	35	mg/kg	10.27.18 10:44	X
m,p-Xylenes	<0.00400	0.200	0.142	71	0.131	66	70-130	8	35	mg/kg	10.27.18 10:44	X
o-Xylene	<0.00200	0.100	0.0714	71	0.0659	66	70-130	8	35	mg/kg	10.27.18 10:44	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	95		92		70-130	%	10.27.18 10:44
4-Bromofluorobenzene	95		98		70-130	%	10.27.18 10:44

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * | (C - E) / (C + E) |$
 $[D] = 100 * (C) / [B]$
 Log Diff. = $\text{Log}(\text{Sample Duplicate}) - \text{Log}(\text{Original Sample})$

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



Setting the Standard since 1990
Stafford, Texas (281-240-4200)
Dallas Texas (214-902-0300)

San Antonio, Texas (210-509-3334)
Midland, Texas (432-704-5251)

Phoenix, Arizona (480-355-0900)

CHAIN OF C STUDY

Page 1 Of 3

[illegible]



Setting the Standard since 1990
Stafford, Texas (281-240-4200)
Dallas Texas (214-902-0300)

CHAIN OF CUSTODY

Page 2 of 3

San Antonio, Texas (210-508-3334)
Midland, Texas (432-704-5261)

Phoenix, Arizona (480-355-0900)

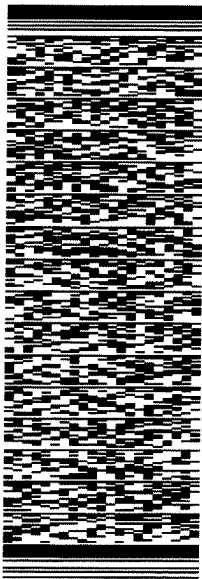
WWW.XNCO.COM

Client / Reporting Information				Project Information				Analytical Information				Matrix Codes			
Company Name / Branch: <u>IT Environmental, Inc. Pelina, Office</u>				Project Name/Number: <u>New Draw #8 Federal</u>											
Company Address: <u>300 West. Building Unit 103 Midland TX 79702</u>				Project Location: <u>Cartsbad, NM</u>											
Email: <u>ababe@itenv.com (432) 704-5178</u>				Invoice To: <u>XTO - KYLE LITTELL</u>											
Phone No: <u>79702</u>				PO Number: <u>ZRP-5007</u>											
Project Contact: <u>Adrian Baker</u>															
Sampler's Name: <u>Ben Baker</u>															
No.	Field ID / Point of Collection	Sample Depth	Date / Time	Matrix	# of bottles	ICI	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Notes	Field Comments
1		SS 47	10/22/18 14:20	5	1										Composite
2		SS 48													
3		SS 49													
4		SS 50													
5		SS 51													
6		SS 52													
7		SS 53													
8		SS 54													
9		SS 55													
10		SS 56													
Turnaround Time (Business days)															
Data Deliverable Information															
Same Day TAT ☒ 5 Day TAT ☐ Level II Std QC ☐ Level IV (Full Data Pkg /raw data) ☐															
Next Day EMERGENCY ☐ 7 Day TAT ☐ Level III Std QC+ Forms ☐ TRRP Level IV ☐															
2 Day EMERGENCY ☐ Contract TAT ☐ Level 3 (CLP Forms) ☐ UST / RG 411 ☐															
3 Day EMERGENCY ☐ TRRP Checklist ☐															
TAT Starts Day received by Lab, if received by 5:00 pm															
SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURTESY DELIVERY															
Relinquished by Sampler:		Date Time:	Received By:	Date Time:	Relinquished By:	Date Time:									
1		10/23/18 16:50	1	10/23/18 16:50	2	10/23/18 16:50									
Relinquished by:		Date Time:	Received By:	Date Time:	Relinquished By:	Date Time:									
3			3		4										
Relinquished by:		Date Time:	Received By:	Date Time:	Relinquished By:	Date Time:									
5			5		6										
Relinquished by:		Date Time:	Received By:	Date Time:	Relinquished By:	Date Time:									
FED-EX / UPS Tracking #		7735100504728													
Cooler Temp.		Thermo Corr. Factor													
Ch Ice		1135													

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Client / Reporting Information				Project Information				Analytical Information				Matrix Codes																																																																																																																																												
Company Name / Branch: IT Environmental, Inc.				Project Name/Number: Pelmaria Office								W = Water S = Soil/Sediment GW = Ground Water DW = Drinking Water P = Product SW = Surface Water SL = Sludge OW = Ocean/Sea Water WI = Wipe O = Oil WM = Waste Water A = Air																																																																																																																																												
Company Address: 3300 W 8th St. Building 1 Unit 103 Midway, TX 75702				Project Location: Carl'sbad, NM																																																																																																																																																				
Email: adrian.baker@itenv.com				Phone No: (432) 704-5178				Invoice To: XTO - KYLE LITTELL																																																																																																																																																
Project Contact: Adrian Baker				PO Number: 2RR-5007																																																																																																																																																				
Sampler's Name: B. C. Bittell																																																																																																																																																								
No. _____				Field ID / Point of Collection _____																																																																																																																																																				
<table border="1"> <thead> <tr> <th>Sample Depth</th> <th>Date</th> <th>Time</th> <th>Matrix</th> <th># of bottles</th> <th>Cl</th> <th>NaOH/Zn Acetate</th> <th>HNO3</th> <th>H2SO4</th> <th>NaOH</th> <th>NaHSO4</th> <th>MEOH</th> <th>NONE</th> </tr> </thead> <tbody> <tr><td>1</td><td>10/22/18</td><td>15:15</td><td>S</td><td>1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>4</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>5</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>6</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>7</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>8</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>9</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>10</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table>				Sample Depth	Date	Time	Matrix	# of bottles	Cl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	1	10/22/18	15:15	S	1									2													3													4													5													6													7													8													9													10													Notes: 10/22/18 G.S.B. BTEX (only BTEX) 8021 TPH (DRO, GRO, MPO) 8015 Chloride (300.00)				Field Comments: Composite	
Sample Depth	Date	Time	Matrix	# of bottles	Cl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE																																																																																																																																												
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ORIGIN ID:CA0A (5/5) 887-6245 XENCO PAC N MAIL 910 W PIERCE ST CARLSBAD NM 88220 UNITED STATES US	SHIP DATE: 24OCT18 ACTWGT: 41.00 LB CAD: 101813706IN/ET4040 DIMS: 18x12x15 IN BILL RECIPIENT
TO HOLD FOR XENCO FEDEX EXPRESS SHIP CENTER FEDEX SHIP CENTER 3600 COUNTY RD 1276 S MIDLAND TX 79711 (800) 794-1236 REF:	
PO: DEPT:	
TRK# 7735 6050 4702 0201 THU - 25 OCT HOLD STANDARD OVERNIGHT HLD MAFA TX-US LBB	
 	

552J1188FB/DCA5

After printing this label:

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Client: LT Environmental, Inc.

Date/ Time Received: 10/25/2018 11:35:00 AM

Work Order #: 603513

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)?	.3
#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: 10/25/2018

Checklist reviewed by:

Jessica Kramer

Date: 10/25/2018

Analytical Report 622232

for
LT Environmental, Inc.

Project Manager: Ashley Ager
North Draw 8 Federal SWD Battery

29-APR-19

Collected By: Client



1211 W. Florida Ave
Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-28), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-18-17), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)
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-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429), North Carolina (483)
Xenco-Lakeland: Florida (E84098)



29-APR-19

Project Manager: **Ashley Ager**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **622232**

North Draw 8 Federal SWD Battery

Project Address: Delaware Basin

Ashley Ager:

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) 622232. 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. 622232 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,

A handwritten signature in black ink that reads '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 622232****LT Environmental, Inc., Arvada, CO**

North Draw 8 Federal SWD Battery

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS03	S	04-19-19 08:55	0 - 1.5 ft	622232-001
FS04	S	04-19-19 09:00	0 - 1.5 ft	622232-002
FS05	S	04-19-19 10:30	0 - 1.5 ft	622232-003
FS06	S	04-19-19 14:00	0 - 1.5 ft	622232-004



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: North Draw 8 Federal SWD Battery

Project ID:
Work Order Number(s): 622232

Report Date: 29-APR-19
Date Received: 04/25/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3087066 Inorganic Anions by EPA 300

Lab Sample ID 622232-003 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 622232-001, -002, -003, -004.

The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3087156 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



Certificate of Analysis Summary 622232

LT Environmental, Inc., Arvada, CO

Project Name: North Draw 8 Federal SWD Battery

Project Id:

Contact: Ashley Ager

Project Location: Delaware Basin

Date Received in Lab: Thu Apr-25-19 11:10 am

Report Date: 29-APR-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	622232-001	622232-002	622232-003	622232-004		
	<i>Field Id:</i>	FS03	FS04	FS05	FS06		
	<i>Depth:</i>	0-1.5 ft	0-1.5 ft	0-1.5 ft	0-1.5 ft		
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL		
	<i>Sampled:</i>	Apr-19-19 08:55	Apr-19-19 09:00	Apr-19-19 10:30	Apr-19-19 14:00		
BTEX by EPA 8021B	<i>Extracted:</i>	Apr-26-19 14:00	Apr-26-19 14:00	Apr-26-19 14:00	Apr-26-19 14:00		
	<i>Analyzed:</i>	Apr-26-19 23:41	Apr-27-19 00:00	Apr-27-19 00:19	Apr-27-19 00:38		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Benzene		<0.00198 0.00198	<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200		
Toluene		<0.00198 0.00198	<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200		
Ethylbenzene		<0.00198 0.00198	<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200		
m,p-Xylenes		<0.00397 0.00397	<0.00402 0.00402	<0.00398 0.00398	<0.00399 0.00399		
o-Xylene		<0.00198 0.00198	<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200		
Total Xylenes		<0.00198 0.00198	<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200		
Total BTEX		<0.00198 0.00198	<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200		
Chloride by EPA 300	<i>Extracted:</i>	Apr-26-19 11:50	Apr-26-19 11:50	Apr-26-19 11:50	Apr-26-19 11:50		
	<i>Analyzed:</i>	Apr-26-19 15:44	Apr-26-19 15:51	Apr-26-19 15:58	Apr-26-19 16:20		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Chloride		168 5.03	53.4 5.03	9.07 5.04	46.3 4.97		
TPH by SW8015 Mod	<i>Extracted:</i>	Apr-26-19 10:00	Apr-26-19 10:00	Apr-26-19 10:00	Apr-26-19 10:00		
	<i>Analyzed:</i>	Apr-26-19 19:01	Apr-26-19 19:22	Apr-26-19 19:42	Apr-26-19 20:02		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0		
Diesel Range Organics (DRO)		<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0		
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0		
Total TPH		<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0		
Total GRO-DRO		<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0		

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

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

Jessica Kramer
Project Assistant



Certificate of Analytical Results 622232

LT Environmental, Inc., Arvada, CO

North Draw 8 Federal SWD Battery

Sample Id: **FS03**
 Lab Sample Id: 622232-001

Matrix: Soil
 Date Collected: 04.19.19 08.55

Date Received: 04.25.19 11.10
 Sample Depth: 0 - 1.5 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3087066

Date Prep: 04.26.19 11.50

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	168	5.03	mg/kg	04.26.19 15.44		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3087218

Date Prep: 04.26.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.26.19 19.01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.26.19 19.01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.26.19 19.01	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.26.19 19.01	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.26.19 19.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	04.26.19 19.01	
o-Terphenyl	84-15-1	81	%	70-135	04.26.19 19.01	



Certificate of Analytical Results 622232



LT Environmental, Inc., Arvada, CO

North Draw 8 Federal SWD Battery

Sample Id: **FS03**
Lab Sample Id: 622232-001

Matrix: Soil
Date Collected: 04.19.19 08.55

Date Received: 04.25.19 11.10
Sample Depth: 0 - 1.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 04.26.19 14.00

Basis: Wet Weight

Seq Number: 3087156

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	04.26.19 23.41	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	04.26.19 23.41	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	04.26.19 23.41	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	04.26.19 23.41	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	04.26.19 23.41	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	04.26.19 23.41	U	1
Total BTEX		<0.00198	0.00198	mg/kg	04.26.19 23.41	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99		%	70-130	04.26.19 23.41	
4-Bromofluorobenzene	460-00-4	103		%	70-130	04.26.19 23.41	



Certificate of Analytical Results 622232

LT Environmental, Inc., Arvada, CO

North Draw 8 Federal SWD Battery

Sample Id: **FS04** Matrix: Soil Date Received: 04.25.19 11.10
 Lab Sample Id: 622232-002 Date Collected: 04.19.19 09.00 Sample Depth: 0 - 1.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 04.26.19 11.50 Basis: Wet Weight
 Seq Number: 3087066

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	53.4	5.03	mg/kg	04.26.19 15.51		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 04.26.19 10.00 Basis: Wet Weight
 Seq Number: 3087218

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.26.19 19.22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.26.19 19.22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.26.19 19.22	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.26.19 19.22	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.26.19 19.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	04.26.19 19.22	
o-Terphenyl	84-15-1	82	%	70-135	04.26.19 19.22	



Certificate of Analytical Results 622232



LT Environmental, Inc., Arvada, CO

North Draw 8 Federal SWD Battery

Sample Id: **FS04**
Lab Sample Id: 622232-002

Matrix: Soil
Date Collected: 04.19.19 09.00

Date Received: 04.25.19 11.10
Sample Depth: 0 - 1.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 04.26.19 14.00

Basis: Wet Weight

Seq Number: 3087156

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	04.27.19 00.00	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	04.27.19 00.00	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	04.27.19 00.00	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	04.27.19 00.00	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	04.27.19 00.00	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	04.27.19 00.00	U	1
Total BTEX		<0.00201	0.00201	mg/kg	04.27.19 00.00	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101		%	70-130	04.27.19 00.00	
4-Bromofluorobenzene	460-00-4	106		%	70-130	04.27.19 00.00	



Certificate of Analytical Results 622232

LT Environmental, Inc., Arvada, CO

North Draw 8 Federal SWD Battery

Sample Id: **FS05** Matrix: Soil Date Received: 04.25.19 11.10
 Lab Sample Id: 622232-003 Date Collected: 04.19.19 10.30 Sample Depth: 0 - 1.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 04.26.19 11.50 Basis: Wet Weight
 Seq Number: 3087066

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	9.07	5.04	mg/kg	04.26.19 15.58		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 04.26.19 10.00 Basis: Wet Weight
 Seq Number: 3087218

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	04.26.19 19.42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	04.26.19 19.42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	04.26.19 19.42	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	04.26.19 19.42	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	04.26.19 19.42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	04.26.19 19.42	
o-Terphenyl	84-15-1	83	%	70-135	04.26.19 19.42	



Certificate of Analytical Results 622232

LT Environmental, Inc., Arvada, CO

North Draw 8 Federal SWD Battery

Sample Id: **FS05**
 Lab Sample Id: 622232-003

Matrix: Soil
 Date Collected: 04.19.19 10.30

Date Received: 04.25.19 11.10
 Sample Depth: 0 - 1.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 04.26.19 14.00

Basis: Wet Weight

Seq Number: 3087156

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.27.19 00.19	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.27.19 00.19	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.27.19 00.19	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.27.19 00.19	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.27.19 00.19	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.27.19 00.19	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.27.19 00.19	U	1
		% Recovery					
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4		107	%	70-130	04.27.19 00.19	
1,4-Difluorobenzene	540-36-3		101	%	70-130	04.27.19 00.19	



Certificate of Analytical Results 622232

LT Environmental, Inc., Arvada, CO

North Draw 8 Federal SWD Battery

Sample Id: **FS06**
 Lab Sample Id: 622232-004

Matrix: Soil
 Date Collected: 04.19.19 14.00

Date Received: 04.25.19 11.10
 Sample Depth: 0 - 1.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 04.26.19 11.50

Basis: Wet Weight

Seq Number: 3087066

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	46.3	4.97	mg/kg	04.26.19 16.20		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 04.26.19 10.00

Basis: Wet Weight

Seq Number: 3087218

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.26.19 20.02	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.26.19 20.02	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.26.19 20.02	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.26.19 20.02	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.26.19 20.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	04.26.19 20.02	
o-Terphenyl	84-15-1	77	%	70-135	04.26.19 20.02	



Certificate of Analytical Results 622232

LT Environmental, Inc., Arvada, CO

North Draw 8 Federal SWD Battery

Sample Id: **FS06**
 Lab Sample Id: 622232-004

Matrix: Soil
 Date Collected: 04.19.19 14.00

Date Received: 04.25.19 11.10
 Sample Depth: 0 - 1.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3087156

Prep Method: SW5030B

% Moisture:

Date Prep: 04.26.19 14.00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.27.19 00.38	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.27.19 00.38	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.27.19 00.38	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	04.27.19 00.38	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.27.19 00.38	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.27.19 00.38	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.27.19 00.38	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	04.27.19 00.38		
4-Bromofluorobenzene	460-00-4	107	%	70-130	04.27.19 00.38		



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



LT Environmental, Inc.
North Draw 8 Federal SWD Battery

Analytical Method: Chloride by EPA 300

Seq Number: 3087066

MB Sample Id: 7676597-1-BLK

Matrix: Solid

LCS Sample Id: 7676597-1-BKS

Prep Method: E300P

Date Prep: 04.26.19

LCSD Sample Id: 7676597-1-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	244	98	246	98	90-110	1	20	mg/kg	04.26.19 14:01	

Analytical Method: Chloride by EPA 300

Seq Number: 3087066

Parent Sample Id: 622230-006

Matrix: Soil

MS Sample Id: 622230-006 S

Prep Method: E300P

Date Prep: 04.26.19

MSD Sample Id: 622230-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	105	248	434	133	433	132	90-110	0	20	mg/kg	04.26.19 14:23	X

Analytical Method: Chloride by EPA 300

Seq Number: 3087066

Parent Sample Id: 622232-003

Matrix: Soil

MS Sample Id: 622232-003 S

Prep Method: E300P

Date Prep: 04.26.19

MSD Sample Id: 622232-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	9.07	252	288	111	290	111	90-110	1	20	mg/kg	04.26.19 16:06	X

Analytical Method: TPH by SW8015 Mod

Seq Number: 3087218

MB Sample Id: 7676722-1-BLK

Matrix: Solid

LCS Sample Id: 7676722-1-BKS

Prep Method: TX1005P

Date Prep: 04.26.19

LCSD Sample Id: 7676722-1-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	857	86	817	82	70-135	5	20	mg/kg	04.26.19 13:29	
Diesel Range Organics (DRO)	<8.13	1000	811	81	828	83	70-135	2	20	mg/kg	04.26.19 13:29	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	98		92		98		70-135	%	04.26.19 13:29
o-Terphenyl	92		76		82		70-135	%	04.26.19 13:29

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C-A) / B$
 $RPD = 200 * |(C-E) / (C+E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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



LT Environmental, Inc.
North Draw 8 Federal SWD Battery

Analytical Method: TPH by SW8015 Mod

Seq Number: 3087218

Parent Sample Id: 622230-001

Matrix: Soil

MS Sample Id: 622230-001 S

Prep Method: TX1005P

Date Prep: 04.26.19

MSD Sample Id: 622230-001 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)	<7.99	998	770	77	826	83	70-135	7	20	mg/kg	04.26.19 14:30	
Diesel Range Organics (DRO)	<8.11	998	786	79	782	78	70-135	1	20	mg/kg	04.26.19 14:30	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	96		88		70-135	%	04.26.19 14:30
o-Terphenyl	76		70		70-135	%	04.26.19 14:30

Analytical Method: BTEX by EPA 8021B

Seq Number: 3087156

MB Sample Id: 7676684-1-BLK

Matrix: Solid

LCS Sample Id: 7676684-1-BKS

Prep Method: SW5030B

Date Prep: 04.26.19

LCSD Sample Id: 7676684-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000384	0.0998	0.113	113	0.110	111	70-130	3	35	mg/kg	04.26.19 15:50	
Toluene	<0.000455	0.0998	0.108	108	0.104	105	70-130	4	35	mg/kg	04.26.19 15:50	
Ethylbenzene	<0.000564	0.0998	0.116	116	0.111	112	70-130	4	35	mg/kg	04.26.19 15:50	
m,p-Xylenes	<0.00101	0.200	0.243	122	0.233	118	70-130	4	35	mg/kg	04.26.19 15:50	
o-Xylene	<0.000344	0.0998	0.117	117	0.114	115	70-130	3	35	mg/kg	04.26.19 15:50	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	91		101		100		70-130	%	04.26.19 15:50
4-Bromofluorobenzene	91		103		104		70-130	%	04.26.19 15:50

Analytical Method: BTEX by EPA 8021B

Seq Number: 3087156

Parent Sample Id: 622380-003

Matrix: Soil

MS Sample Id: 622380-003 S

Prep Method: SW5030B

Date Prep: 04.26.19

MSD Sample Id: 622380-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000383	0.0996	0.103	103	0.101	101	70-130	2	35	mg/kg	04.26.19 16:28	
Toluene	<0.000454	0.0996	0.0930	93	0.0925	93	70-130	1	35	mg/kg	04.26.19 16:28	
Ethylbenzene	<0.000563	0.0996	0.0885	89	0.0910	91	70-130	3	35	mg/kg	04.26.19 16:28	
m,p-Xylenes	<0.00101	0.199	0.184	92	0.188	94	70-130	2	35	mg/kg	04.26.19 16:28	
o-Xylene	<0.000343	0.0996	0.0894	90	0.0914	91	70-130	2	35	mg/kg	04.26.19 16:28	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		101		70-130	%	04.26.19 16:28
4-Bromofluorobenzene	108		105		70-130	%	04.26.19 16:28

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C-A) / B$
 $RPD = 200 * |(C-E) / (C+E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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



Chain of Custody

Work Order No: 1622232

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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Project Manager:	Ashley Agan	Bill to: (if different)	Kyle Little
Company Name:	LT Environmental	Company Name:	XTO
Address:	3300 North A Street	Address:	3104 E. Greene Street
City, State ZIP:	Midland TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(760) 385-1096	Email:	agan@xenco.com & ashley@xenco.com

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

Project Name:	Wash Draw 8 Federal SMD Battery	Turn Around	☒ Routine ☐ Rush:
Project Number:	22P-5007		
P.O. Number:			
Sampler's Name:	Amya Byers	Due Date:	

Temp Blank:	Yes ☐ No ☒	Wet Ice:	Yes ☐ No ☒
Temperature (°C):	0.0	Thermometer:	120
Received In tact:	Yes ☒ No ☐		
Cooler Custody Seals:	Yes ☐ No ☒	Correction Factor:	10.1
Sample Custody Seals:	Yes ☒ No ☐	Total Containers:	

ANALYSIS REQUEST												Work Order Notes											
Number of Containers TPH (EPA 8015) BTEX (EPA 8021) Chloride (EPA 300.0)												TAT starts the day received by the lab, if received by 4:30pm Sample Comments											

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth												
ES03	S	4/19/19	0855	0-1.5'												
ES04	S	4/19/19	0900	0-1.5'												
ES05	S	4/19/19	1030	0-1.5'												
ES06	S	4/19/19	1400	0-1.5'												

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 Ti 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 Ti U	1631 / 245.1 / 7470 / 7471 : Hg	

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1. Amya Byers		04/23/19 16:20			04/23/19 16:40
3. COX	to Food Ex	4/24/19 14:00			4/25/19 11:10
5					

ORIGIN ID:CAOA (281) 240-4200
 SAMPLE CUSTODY
 XENCO LABORATORIES NM
 1089 N CANAL ST
 CARLSBAD, NM 88220
 UNITED STATES US

SHIP DATE: 24APR19
 ACTWGT: 45.60 LB
 CAD: 114488676/NET4100
 DIMS: 22x15x16 IN
 BILL SENDER

TO SAMPLE RECEIVING

3600 S COUNTY ROAD 1276

MIDLAND TX 79706

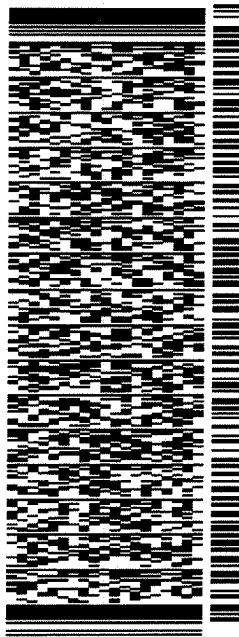
(432) 704-5440

REF:

PO:

DEPT:

565J1/D7E5/23AD



J191019010701uu

THU - 25 APR HOLD

PRIORITY OVERNIGHT

TRK#

0201

7750 5266 0121

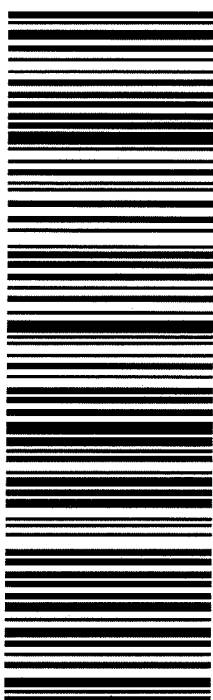
HLD

79706

TX-US

LBB

41 MAFA



After printing this label:

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Client: LT Environmental, Inc.

Date/ Time Received: 04/25/2019 11:10:00 AM

Work Order #: 622232

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)?	.2
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	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: 04/25/2019

Checklist reviewed by:

Jessica Kramer

Date: 04/29/2019

Analytical Report 622386

for
LT Environmental, Inc.

Project Manager: Ashley Ager

Nash Draw #8 Fed. SWD

2RP-5007

02-MAY-19

Collected By: Client



**1211 W. Florida Ave
Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-28), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-18-17), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)
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-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429), North Carolina (483)
Xenco-Lakeland: Florida (E84098)



02-MAY-19

Project Manager: **Ashley Ager**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **622386**

Nash Draw #8 Fed. SWD

Project Address: Delaware Basin

Ashley Ager:

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) 622386. 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. 622386 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,

A handwritten signature in black ink that reads '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 622386****LT Environmental, Inc., Arvada, CO**

Nash Draw #8 Fed. SWD

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW13	S	04-23-19 14:30	0 - 2 ft	622386-001
SW14	S	04-23-19 14:45	0 - 2 ft	622386-002
SW15	S	04-23-19 15:00	0 - 2 ft	622386-003
SW16	S	04-23-19 15:25	0 - 2 ft	622386-004



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Nash Draw #8 Fed. SWD

Project ID: 2RP-5007
Work Order Number(s): 622386

Report Date: 02-MAY-19
Date Received: 04/26/2019

Sample receipt non conformances and comments:

Per client request, Sample 001 re ran for Chloride. New data was imported. New Version generated. JK
05/02/19

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3087354 BTEX by EPA 8021B

Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected.

Samples affected are: 622386-004,622386-002.

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



Certificate of Analysis Summary 622386

LT Environmental, Inc., Arvada, CO

Project Name: Nash Draw #8 Fed. SWD

Project Id: 2RP-5007
Contact: Ashley Ager
Project Location: Delaware Basin

Date Received in Lab: Fri Apr-26-19 11:30 am
Report Date: 02-MAY-19
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	622386-001	622386-002	622386-003	622386-004		
	<i>Field Id:</i>	SW13	SW14	SW15	SW16		
	<i>Depth:</i>	0-2 ft	0-2 ft	0-2 ft	0-2 ft		
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL		
	<i>Sampled:</i>	Apr-23-19 14:30	Apr-23-19 14:45	Apr-23-19 15:00	Apr-23-19 15:25		
BTEX by EPA 8021B	<i>Extracted:</i>	Apr-29-19 13:00	Apr-29-19 13:00	Apr-29-19 13:00	Apr-29-19 13:00		
	<i>Analyzed:</i>	Apr-29-19 14:31	Apr-29-19 14:50	Apr-29-19 15:09	Apr-29-19 15:29		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Benzene		<0.00202 0.00202	<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201		
Toluene		<0.00202 0.00202	<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201		
Ethylbenzene		<0.00202 0.00202	<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201		
m,p-Xylenes		<0.00403 0.00403	<0.00398 0.00398	<0.00398 0.00398	<0.00402 0.00402		
o-Xylene		<0.00202 0.00202	<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201		
Total Xylenes		<0.00202 0.00202	<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201		
Total BTEX		<0.00202 0.00202	<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201		
Chloride by EPA 300	<i>Extracted:</i>	May-01-19 11:30	Apr-26-19 16:30	Apr-26-19 16:30	Apr-26-19 16:30		
	<i>Analyzed:</i>	May-01-19 13:42	Apr-27-19 17:10	Apr-27-19 17:17	Apr-27-19 17:25		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Chloride		405 5.00	594 5.01	95.4 4.99	132 5.03		
TPH by SW8015 Mod	<i>Extracted:</i>	Apr-27-19 14:00	Apr-27-19 14:00	Apr-27-19 14:00	Apr-27-19 14:00		
	<i>Analyzed:</i>	Apr-29-19 07:27	Apr-29-19 07:47	Apr-29-19 08:07	Apr-29-19 08:28		
	<i>Units/RL:</i>	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		
Diesel Range Organics (DRO)		42.2 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0		
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0		
Total TPH		42.2 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0		
Total GRO-DRO		42.2 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0		

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

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

Jessica Kramer
Project Assistant



Certificate of Analytical Results 622386

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Fed. SWD

Sample Id: **SW13**
 Lab Sample Id: 622386-001

Matrix: Soil
 Date Collected: 04.23.19 14.30

Date Received: 04.26.19 11.30
 Sample Depth: 0 - 2 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3087583

Date Prep: 05.01.19 11.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	405	5.00	mg/kg	05.01.19 13.42		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3087228

Date Prep: 04.27.19 14.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.29.19 07.27	U	1
Diesel Range Organics (DRO)	C10C28DRO	42.2	15.0	mg/kg	04.29.19 07.27		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.29.19 07.27	U	1
Total TPH	PHC635	42.2	15.0	mg/kg	04.29.19 07.27		1
Total GRO-DRO	PHC628	42.2	15.0	mg/kg	04.29.19 07.27		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	04.29.19 07.27	
o-Terphenyl	84-15-1	98	%	70-135	04.29.19 07.27	



Certificate of Analytical Results 622386

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Fed. SWD

Sample Id: **SW13**
 Lab Sample Id: 622386-001

Matrix: Soil
 Date Collected: 04.23.19 14.30

Date Received: 04.26.19 11.30
 Sample Depth: 0 - 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 04.29.19 13.00

Basis: Wet Weight

Seq Number: 3087354

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	04.29.19 14.31	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	04.29.19 14.31	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	04.29.19 14.31	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	04.29.19 14.31	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	04.29.19 14.31	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	04.29.19 14.31	U	1
Total BTEX		<0.00202	0.00202	mg/kg	04.29.19 14.31	U	1
		% Recovery					
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3		95	%	70-130	04.29.19 14.31	
4-Bromofluorobenzene	460-00-4		127	%	70-130	04.29.19 14.31	



Certificate of Analytical Results 622386

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Fed. SWD

Sample Id: **SW14**
 Lab Sample Id: 622386-002

Matrix: Soil
 Date Collected: 04.23.19 14.45

Date Received: 04.26.19 11.30
 Sample Depth: 0 - 2 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3087118

Date Prep: 04.26.19 16.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	594	5.01	mg/kg	04.27.19 17.10		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3087228

Date Prep: 04.27.19 14.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.29.19 07.47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.29.19 07.47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.29.19 07.47	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.29.19 07.47	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.29.19 07.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	04.29.19 07.47	
o-Terphenyl	84-15-1	102	%	70-135	04.29.19 07.47	



Certificate of Analytical Results 622386

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Fed. SWD

Sample Id: **SW14**
 Lab Sample Id: 622386-002

Matrix: Soil
 Date Collected: 04.23.19 14.45

Date Received: 04.26.19 11.30
 Sample Depth: 0 - 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 04.29.19 13.00

Basis: Wet Weight

Seq Number: 3087354

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.29.19 14.50	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.29.19 14.50	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.29.19 14.50	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.29.19 14.50	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.29.19 14.50	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.29.19 14.50	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.29.19 14.50	U	1
		% Recovery					
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4		149	%	70-130	04.29.19 14.50	**
1,4-Difluorobenzene	540-36-3		95	%	70-130	04.29.19 14.50	



Certificate of Analytical Results 622386

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Fed. SWD

Sample Id: **SW15**
 Lab Sample Id: 622386-003

Matrix: Soil
 Date Collected: 04.23.19 15.00

Date Received: 04.26.19 11.30
 Sample Depth: 0 - 2 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3087118

Date Prep: 04.26.19 16.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	95.4	4.99	mg/kg	04.27.19 17.17		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3087228

Date Prep: 04.27.19 14.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.29.19 08.07	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.29.19 08.07	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.29.19 08.07	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.29.19 08.07	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.29.19 08.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	04.29.19 08.07	
o-Terphenyl	84-15-1	98	%	70-135	04.29.19 08.07	



Certificate of Analytical Results 622386

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Fed. SWD

Sample Id: **SW15**
 Lab Sample Id: 622386-003

Matrix: Soil
 Date Collected: 04.23.19 15.00

Date Received: 04.26.19 11.30
 Sample Depth: 0 - 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 04.29.19 13.00

Basis: Wet Weight

Seq Number: 3087354

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.29.19 15.09	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.29.19 15.09	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.29.19 15.09	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.29.19 15.09	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.29.19 15.09	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.29.19 15.09	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.29.19 15.09	U	1
		% Recovery					
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3		103	%	70-130	04.29.19 15.09	
4-Bromofluorobenzene	460-00-4		110	%	70-130	04.29.19 15.09	



Certificate of Analytical Results 622386

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Fed. SWD

Sample Id: **SW16**
 Lab Sample Id: 622386-004

Matrix: Soil
 Date Collected: 04.23.19 15.25

Date Received: 04.26.19 11.30
 Sample Depth: 0 - 2 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3087118

Date Prep: 04.26.19 16.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	132	5.03	mg/kg	04.27.19 17.25		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3087228

Date Prep: 04.27.19 14.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.29.19 08.28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.29.19 08.28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.29.19 08.28	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.29.19 08.28	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.29.19 08.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	04.29.19 08.28	
o-Terphenyl	84-15-1	100	%	70-135	04.29.19 08.28	



Certificate of Analytical Results 622386

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Fed. SWD

Sample Id: **SW16**
 Lab Sample Id: 622386-004

Matrix: Soil
 Date Collected: 04.23.19 15.25

Date Received: 04.26.19 11.30
 Sample Depth: 0 - 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 04.29.19 13.00

Basis: Wet Weight

Seq Number: 3087354

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	04.29.19 15.29	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	04.29.19 15.29	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	04.29.19 15.29	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	04.29.19 15.29	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	04.29.19 15.29	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	04.29.19 15.29	U	1
Total BTEX		<0.00201	0.00201	mg/kg	04.29.19 15.29	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	151	%	70-130	04.29.19 15.29	**	
1,4-Difluorobenzene	540-36-3	95	%	70-130	04.29.19 15.29		



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



LT Environmental, Inc.

Nash Draw #8 Fed. SWD

Analytical Method: Chloride by EPA 300

Seq Number: 3087118

MB Sample Id: 7676642-1-BLK

Matrix: Solid

LCS Sample Id: 7676642-1-BKS

Prep Method: E300P

Date Prep: 04.26.19

LCSD Sample Id: 7676642-1-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	258	103	263	105	90-110	2	20	mg/kg	04.27.19 14:21	

Analytical Method: Chloride by EPA 300

Seq Number: 3087583

MB Sample Id: 7676916-1-BLK

Matrix: Solid

LCS Sample Id: 7676916-1-BKS

Prep Method: E300P

Date Prep: 05.01.19

LCSD Sample Id: 7676916-1-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	266	106	266	106	90-110	0	20	mg/kg	05.01.19 11:02	

Analytical Method: Chloride by EPA 300

Seq Number: 3087118

Parent Sample Id: 622382-010

Matrix: Soil

MS Sample Id: 622382-010 S

Prep Method: E300P

Date Prep: 04.26.19

MSD Sample Id: 622382-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	68.2	250	309	96	332	106	90-110	7	20	mg/kg	04.27.19 14:43	

Analytical Method: Chloride by EPA 300

Seq Number: 3087118

Parent Sample Id: 622382-012

Matrix: Soil

MS Sample Id: 622382-012 S

Prep Method: E300P

Date Prep: 04.26.19

MSD Sample Id: 622382-012 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	3.03	249	277	110	281	112	90-110	1	20	mg/kg	04.27.19 16:18	X

Analytical Method: Chloride by EPA 300

Seq Number: 3087583

Parent Sample Id: 622682-003

Matrix: Soil

MS Sample Id: 622682-003 S

Prep Method: E300P

Date Prep: 05.01.19

MSD Sample Id: 622682-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	28.7	250	291	105	291	105	90-110	0	20	mg/kg	05.01.19 11:20	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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



LT Environmental, Inc.

Nash Draw #8 Fed. SWD

Analytical Method: Chloride by EPA 300

Seq Number: 3087583

Parent Sample Id: 622760-015

Matrix: Soil

MS Sample Id: 622760-015 S

Prep Method: E300P

Date Prep: 05.01.19

MSD Sample Id: 622760-015 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	23.9	248	276	102	275	101	90-110	0	20	mg/kg	05.01.19 12:43	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3087228

MB Sample Id: 7676731-1-BLK

Matrix: Solid

LCS Sample Id: 7676731-1-BKS

Prep Method: TX1005P

Date Prep: 04.27.19

LCSD Sample Id: 7676731-1-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	1050	105	1050	105	70-135	0	20	mg/kg	04.29.19 00:03	
Diesel Range Organics (DRO)	<8.13	1000	1060	106	1070	107	70-135	1	20	mg/kg	04.29.19 00:03	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	96		130		122		70-135	%	04.29.19 00:03
o-Terphenyl	98		109		107		70-135	%	04.29.19 00:03

Analytical Method: TPH by SW8015 Mod

Seq Number: 3087228

Parent Sample Id: 622392-021

Matrix: Soil

MS Sample Id: 622392-021 S

Prep Method: TX1005P

Date Prep: 04.27.19

MSD Sample Id: 622392-021 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)	<7.99	998	966	97	994	99	70-135	3	20	mg/kg	04.29.19 01:04	
Diesel Range Organics (DRO)	33.7	998	980	95	1010	98	70-135	3	20	mg/kg	04.29.19 01:04	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	120		123		70-135	%	04.29.19 01:04
o-Terphenyl	100		105		70-135	%	04.29.19 01:04

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = $\text{Log}(\text{Sample Duplicate}) - \text{Log}(\text{Original Sample})$

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



LT Environmental, Inc.

Nash Draw #8 Fed. SWD

Analytical Method: BTEX by EPA 8021B

Seq Number: 3087354

MB Sample Id: 7676745-1-BLK

Matrix: Solid

LCS Sample Id: 7676745-1-BKS

Prep Method: SW5030B

Date Prep: 04.29.19

LCSD Sample Id: 7676745-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.101	0.117	116	0.112	113	70-130	4	35	mg/kg	04.29.19 12:38	
Toluene	<0.00201	0.101	0.106	105	0.102	103	70-130	4	35	mg/kg	04.29.19 12:38	
Ethylbenzene	<0.00201	0.101	0.114	113	0.110	111	70-130	4	35	mg/kg	04.29.19 12:38	
m,p-Xylenes	<0.00402	0.201	0.234	116	0.225	114	70-130	4	35	mg/kg	04.29.19 12:38	
o-Xylene	<0.00201	0.101	0.114	113	0.110	111	70-130	4	35	mg/kg	04.29.19 12:38	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		98		97		70-130	%	04.29.19 12:38
4-Bromofluorobenzene	97		103		101		70-130	%	04.29.19 12:38

Analytical Method: BTEX by EPA 8021B

Seq Number: 3087354

Parent Sample Id: 622386-001

Matrix: Soil

MS Sample Id: 622386-001 S

Prep Method: SW5030B

Date Prep: 04.29.19

MSD Sample Id: 622386-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0994	0.0884	89	0.0869	87	70-130	2	35	mg/kg	04.29.19 13:16	
Toluene	<0.00199	0.0994	0.0815	82	0.0784	78	70-130	4	35	mg/kg	04.29.19 13:16	
Ethylbenzene	<0.00199	0.0994	0.0859	86	0.0816	82	70-130	5	35	mg/kg	04.29.19 13:16	
m,p-Xylenes	<0.00398	0.199	0.176	88	0.166	83	70-130	6	35	mg/kg	04.29.19 13:16	
o-Xylene	<0.00199	0.0994	0.0861	87	0.0815	82	70-130	5	35	mg/kg	04.29.19 13:16	

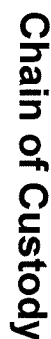
Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	97		99		70-130	%	04.29.19 13:16
4-Bromofluorobenzene	104		102		70-130	%	04.29.19 13:16

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C-A) / B$
 $RPD = 200 * |(C-E) / (C+E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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



Work Order No:

027306

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0800 San Antonio, TX (210) 509-3334
Midland, TX (432) 704-5440 EL Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296
Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 555-3927
Hobbs, NM (575) 392-7650

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Page 1 of 1

Work Order Comments	
Program: UST/PST	☐ PRP ☐ brownfields ☐ RC ☐ Superfund ☐
State of Project:	
Reporting Level II	☐ Level III ☐ ST/UST ☐ RRP ☐ Level IV ☐
Deliverables: EDD	☐ ADAPT ☐ Other:

[illegible][illegible]

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 Ti 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 Ti U
			1631 / 245.1 / 7470 / 7471 : Hg

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 		04/25/19 12:33			4/25/19 14:00
2		4-26-19 1130	4		
3			6		
4					
5					



Client: LT Environmental, Inc.

Date/ Time Received: 04/26/2019 11:30:00 AM

Work Order #: 622386

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)?	3
#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)?	No
#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:

Katie Lowe

Date: 04/26/2019

Checklist reviewed by:

Jessica Kramer

Date: 04/29/2019

Analytical Report 622388

for
LT Environmental, Inc.

Project Manager: Ashley Ager

Nash Draw #8 Fed. SWD

2RP-5007

01-MAY-19

Collected By: Client



**1211 W. Florida Ave
Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-28), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-18-17), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)
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-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429), North Carolina (483)
Xenco-Lakeland: Florida (E84098)



01-MAY-19

Project Manager: **Ashley Ager**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **622388**

Nash Draw #8 Fed. SWD

Project Address: Delaware Basin

Ashley Ager:

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) 622388. 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. 622388 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,

A handwritten signature in black ink that reads '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.

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

**Sample Cross Reference 622388****LT Environmental, Inc., Arvada, CO**

Nash Draw #8 Fed. SWD

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH01	S	04-23-19 10:10	0.5 ft	622388-001
PH01A	S	04-23-19 10:25	1 ft	622388-002
PH02	S	04-23-19 10:30	0.5 ft	622388-003
PH02A	S	04-23-19 10:50	1 ft	622388-004
PH03	S	04-23-19 11:10	0.5 ft	622388-005
PH03A	S	04-23-19 11:15	1 ft	622388-006
FS07	S	04-23-19 15:45	2 ft	622388-007
FS08	S	04-23-19 15:55	2 ft	622388-008



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Nash Draw #8 Fed. SWD

Project ID: 2RP-5007

Work Order Number(s): 622388

Report Date: 01-MAY-19

Date Received: 04/26/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3087479 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



Certificate of Analysis Summary 622388

LT Environmental, Inc., Arvada, CO

Project Name: Nash Draw #8 Fed. SWD

Project Id: 2RP-5007
Contact: Ashley Ager
Project Location: Delaware Basin

Date Received in Lab: Fri Apr-26-19 11:30 am
Report Date: 01-MAY-19
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	622388-001	622388-002	622388-003	622388-004	622388-005	622388-006
	<i>Field Id:</i>	PH01	PH01A	PH02	PH02A	PH03	PH03A
	<i>Depth:</i>	0.5- ft	1- ft	0.5- ft	1- ft	0.5- ft	1- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Apr-23-19 10:10	Apr-23-19 10:25	Apr-23-19 10:30	Apr-23-19 10:50	Apr-23-19 11:10	Apr-23-19 11:15
BTEX by EPA 8021B	<i>Extracted:</i>	Apr-30-19 08:45	Apr-30-19 08:45	Apr-30-19 08:45	Apr-30-19 08:45	Apr-30-19 08:45	Apr-30-19 08:45
	<i>Analyzed:</i>	Apr-30-19 12:35	Apr-30-19 12:54	Apr-30-19 13:13	Apr-30-19 13:33	Apr-30-19 13:52	Apr-30-19 14:12
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202
Toluene		<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202
Ethylbenzene		<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202
m,p-Xylenes		<0.00402 0.00402	<0.00400 0.00400	<0.00397 0.00397	<0.00398 0.00398	<0.00399 0.00399	<0.00403 0.00403
o-Xylene		<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202
Total Xylenes		<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202
Total BTEX		<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202
Chloride by EPA 300	<i>Extracted:</i>	Apr-26-19 16:30	Apr-26-19 16:30	Apr-26-19 16:30	Apr-26-19 17:00	Apr-26-19 17:00	Apr-26-19 17:00
	<i>Analyzed:</i>	Apr-27-19 17:32	Apr-27-19 17:39	Apr-27-19 17:46	Apr-26-19 22:15	Apr-26-19 22:44	Apr-26-19 22:51
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		132 5.03	301 5.03	295 5.00	92.7 5.05	662 5.04	532 4.99
TPH by SW8015 Mod	<i>Extracted:</i>	Apr-27-19 15:00	Apr-27-19 15:00	Apr-27-19 15:00	Apr-27-19 15:00	Apr-27-19 15:00	Apr-27-19 15:00
	<i>Analyzed:</i>	Apr-28-19 17:44	Apr-28-19 18:05	Apr-28-19 19:06	Apr-28-19 19:27	Apr-28-19 19:48	Apr-28-19 20:08
	<i>Units/RL:</i>	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	<14.9 14.9	<15.0 15.0
Diesel Range Organics (DRO)		<15.0 15.0	<15.0 15.0	28.1 15.0	27.8 15.0	18.8 14.9	17.1 15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0
Total TPH		<15.0 15.0	<15.0 15.0	28.1 15.0	27.8 15.0	18.8 14.9	17.1 15.0
Total GRO-DRO		<15.0 15.0	<15.0 15.0	28.1 15.0	27.8 15.0	18.8 14.9	17.1 15.0

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

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 622388

LT Environmental, Inc., Arvada, CO

Project Name: Nash Draw #8 Fed. SWD

Project Id: 2RP-5007
Contact: Ashley Ager
Project Location: Delaware Basin

Date Received in Lab: Fri Apr-26-19 11:30 am
Report Date: 01-MAY-19
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	622388-007	622388-008				
	Field Id:	FS07	FS08				
	Depth:	2- ft	2- ft				
	Matrix:	SOIL	SOIL				
	Sampled:	Apr-23-19 15:45	Apr-23-19 15:55				
BTEX by EPA 8021B	Extracted:	Apr-30-19 08:45	Apr-30-19 08:45				
	Analyzed:	Apr-30-19 14:31	Apr-30-19 14:51				
	Units/RL:	mg/kg RL	mg/kg RL				
	Benzene	<0.00200 0.00200	<0.00199 0.00199				
	Toluene	<0.00200 0.00200	<0.00199 0.00199				
	Ethylbenzene	<0.00200 0.00200	<0.00199 0.00199				
	m,p-Xylenes	<0.00401 0.00401	<0.00398 0.00398				
	o-Xylene	<0.00200 0.00200	<0.00199 0.00199				
	Total Xylenes	<0.00200 0.00200	<0.00199 0.00199				
	Total BTEX	<0.00200 0.00200	<0.00199 0.00199				
Chloride by EPA 300	Extracted:	Apr-26-19 17:00	Apr-26-19 17:00				
	Analyzed:	Apr-26-19 22:59	Apr-26-19 23:20				
	Units/RL:	mg/kg RL	mg/kg RL				
	Chloride	208 4.98	105 4.98				
TPH by SW8015 Mod	Extracted:	Apr-27-19 15:00	Apr-27-19 15:00				
	Analyzed:	Apr-28-19 20:28	Apr-28-19 20:49				
	Units/RL:	mg/kg RL	mg/kg RL				
	Gasoline Range Hydrocarbons (GRO)	<15.0 15.0	<15.0 15.0				
	Diesel Range Organics (DRO)	<15.0 15.0	15.6 15.0				
	Motor Oil Range Hydrocarbons (MRO)	<15.0 15.0	<15.0 15.0				
	Total TPH	<15.0 15.0	15.6 15.0				
	Total GRO-DRO	<15.0 15.0	15.6 15.0				

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

Jessica Kramer
Project Assistant



Certificate of Analytical Results 622388

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Fed. SWD

Sample Id: **PH01**
 Lab Sample Id: 622388-001

Matrix: Soil
 Date Collected: 04.23.19 10.10

Date Received: 04.26.19 11.30
 Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3087118

Date Prep: 04.26.19 16.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	132	5.03	mg/kg	04.27.19 17.32		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3087232

Date Prep: 04.27.19 15.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.28.19 17.44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.28.19 17.44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.28.19 17.44	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.28.19 17.44	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.28.19 17.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	04.28.19 17.44	
o-Terphenyl	84-15-1	87	%	70-135	04.28.19 17.44	



Certificate of Analytical Results 622388

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Fed. SWD

Sample Id: **PH01**
 Lab Sample Id: 622388-001

Matrix: Soil
 Date Collected: 04.23.19 10.10

Date Received: 04.26.19 11.30
 Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3087479

Prep Method: SW5030B

% Moisture:

Date Prep: 04.30.19 08.45

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	04.30.19 12.35	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	04.30.19 12.35	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	04.30.19 12.35	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	04.30.19 12.35	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	04.30.19 12.35	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	04.30.19 12.35	U	1
Total BTEX		<0.00201	0.00201	mg/kg	04.30.19 12.35	U	1
		% Recovery					
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3		97	%	70-130	04.30.19 12.35	
4-Bromofluorobenzene	460-00-4		104	%	70-130	04.30.19 12.35	



Certificate of Analytical Results 622388

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Fed. SWD

Sample Id: **PH01A** Matrix: Soil Date Received: 04.26.19 11.30
 Lab Sample Id: 622388-002 Date Collected: 04.23.19 10.25 Sample Depth: 1 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: SPC % Moisture:
 Analyst: SPC Date Prep: 04.26.19 16.30 Basis: Wet Weight
 Seq Number: 3087118

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	301	5.03	mg/kg	04.27.19 17.39		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 04.27.19 15.00 Basis: Wet Weight
 Seq Number: 3087232

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.28.19 18.05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.28.19 18.05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.28.19 18.05	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.28.19 18.05	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.28.19 18.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	04.28.19 18.05	
o-Terphenyl	84-15-1	95	%	70-135	04.28.19 18.05	



Certificate of Analytical Results 622388

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Fed. SWD

Sample Id: **PH01A**
 Lab Sample Id: 622388-002

Matrix: Soil
 Date Collected: 04.23.19 10.25

Date Received: 04.26.19 11.30
 Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3087479

Date Prep: 04.30.19 08.45

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	04.30.19 12.54	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.30.19 12.54	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.30.19 12.54	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	04.30.19 12.54	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.30.19 12.54	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.30.19 12.54	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.30.19 12.54	U	1
		% Recovery					
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4		98	%	70-130	04.30.19 12.54	
1,4-Difluorobenzene	540-36-3		97	%	70-130	04.30.19 12.54	



Certificate of Analytical Results 622388

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Fed. SWD

Sample Id: **PH02**
 Lab Sample Id: 622388-003

Matrix: Soil
 Date Collected: 04.23.19 10.30

Date Received: 04.26.19 11.30
 Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3087118

Date Prep: 04.26.19 16.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	295	5.00	mg/kg	04.27.19 17.46		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3087232

Date Prep: 04.27.19 15.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.28.19 19.06	U	1
Diesel Range Organics (DRO)	C10C28DRO	28.1	15.0	mg/kg	04.28.19 19.06		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.28.19 19.06	U	1
Total TPH	PHC635	28.1	15.0	mg/kg	04.28.19 19.06		1
Total GRO-DRO	PHC628	28.1	15.0	mg/kg	04.28.19 19.06		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	83	%	70-135	04.28.19 19.06	
o-Terphenyl	84-15-1	81	%	70-135	04.28.19 19.06	



Certificate of Analytical Results 622388

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Fed. SWD

Sample Id: **PH02**
 Lab Sample Id: 622388-003

Matrix: Soil
 Date Collected: 04.23.19 10.30

Date Received: 04.26.19 11.30
 Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3087479

Date Prep: 04.30.19 08.45

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	04.30.19 13.13	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	04.30.19 13.13	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	04.30.19 13.13	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	04.30.19 13.13	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	04.30.19 13.13	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	04.30.19 13.13	U	1
Total BTEX		<0.00198	0.00198	mg/kg	04.30.19 13.13	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	102	%	70-130	04.30.19 13.13		
1,4-Difluorobenzene	540-36-3	98	%	70-130	04.30.19 13.13		



Certificate of Analytical Results 622388

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Fed. SWD

Sample Id: **PH02A**
 Lab Sample Id: 622388-004

Matrix: Soil
 Date Collected: 04.23.19 10.50

Date Received: 04.26.19 11.30
 Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3087124

Date Prep: 04.26.19 17.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	92.7	5.05	mg/kg	04.26.19 22.15		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3087232

Date Prep: 04.27.19 15.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.28.19 19.27	U	1
Diesel Range Organics (DRO)	C10C28DRO	27.8	15.0	mg/kg	04.28.19 19.27		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.28.19 19.27	U	1
Total TPH	PHC635	27.8	15.0	mg/kg	04.28.19 19.27		1
Total GRO-DRO	PHC628	27.8	15.0	mg/kg	04.28.19 19.27		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	04.28.19 19.27	
o-Terphenyl	84-15-1	93	%	70-135	04.28.19 19.27	



Certificate of Analytical Results 622388

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Fed. SWD

Sample Id: **PH02A**
 Lab Sample Id: 622388-004

Matrix: Soil
 Date Collected: 04.23.19 10.50

Date Received: 04.26.19 11.30
 Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3087479

Date Prep: 04.30.19 08.45

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	04.30.19 13.33	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.30.19 13.33	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.30.19 13.33	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.30.19 13.33	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.30.19 13.33	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.30.19 13.33	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.30.19 13.33	U	1
		% Recovery					
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4		104	%	70-130	04.30.19 13.33	
1,4-Difluorobenzene	540-36-3		99	%	70-130	04.30.19 13.33	



Certificate of Analytical Results 622388

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Fed. SWD

Sample Id: **PH03**
 Lab Sample Id: 622388-005

Matrix: Soil
 Date Collected: 04.23.19 11.10

Date Received: 04.26.19 11.30
 Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300
 Tech: SPC
 Analyst: SPC
 Seq Number: 3087124

Prep Method: E300P
 % Moisture:
 Basis: Wet Weight
 Date Prep: 04.26.19 17.00

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	662	5.04	mg/kg	04.26.19 22.44		1

Analytical Method: TPH by SW8015 Mod
 Tech: ARM
 Analyst: ARM
 Seq Number: 3087232

Prep Method: TX1005P
 % Moisture:
 Basis: Wet Weight
 Date Prep: 04.27.19 15.00

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	04.28.19 19.48	U	1
Diesel Range Organics (DRO)	C10C28DRO	18.8	14.9	mg/kg	04.28.19 19.48		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	04.28.19 19.48	U	1
Total TPH	PHC635	18.8	14.9	mg/kg	04.28.19 19.48		1
Total GRO-DRO	PHC628	18.8	14.9	mg/kg	04.28.19 19.48		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	04.28.19 19.48	
o-Terphenyl	84-15-1	86	%	70-135	04.28.19 19.48	



Certificate of Analytical Results 622388

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Fed. SWD

Sample Id: **PH03**
 Lab Sample Id: 622388-005

Matrix: Soil
 Date Collected: 04.23.19 11.10

Date Received: 04.26.19 11.30
 Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3087479

Date Prep: 04.30.19 08.45

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	04.30.19 13.52	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.30.19 13.52	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.30.19 13.52	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	04.30.19 13.52	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.30.19 13.52	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.30.19 13.52	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.30.19 13.52	U	1
		% Recovery					
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4		104	%	70-130	04.30.19 13.52	
1,4-Difluorobenzene	540-36-3		99	%	70-130	04.30.19 13.52	



Certificate of Analytical Results 622388

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Fed. SWD

Sample Id: **PH03A**
 Lab Sample Id: 622388-006

Matrix: Soil
 Date Collected: 04.23.19 11.15

Date Received: 04.26.19 11.30
 Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3087124

Date Prep: 04.26.19 17.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	532	4.99	mg/kg	04.26.19 22.51		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3087232

Date Prep: 04.27.19 15.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.28.19 20.08	U	1
Diesel Range Organics (DRO)	C10C28DRO	17.1	15.0	mg/kg	04.28.19 20.08		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.28.19 20.08	U	1
Total TPH	PHC635	17.1	15.0	mg/kg	04.28.19 20.08		1
Total GRO-DRO	PHC628	17.1	15.0	mg/kg	04.28.19 20.08		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	04.28.19 20.08	
o-Terphenyl	84-15-1	93	%	70-135	04.28.19 20.08	



Certificate of Analytical Results 622388

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Fed. SWD

Sample Id: **PH03A**
 Lab Sample Id: 622388-006

Matrix: Soil
 Date Collected: 04.23.19 11.15

Date Received: 04.26.19 11.30
 Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 04.30.19 08.45

Basis: Wet Weight

Seq Number: 3087479

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	04.30.19 14.12	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	04.30.19 14.12	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	04.30.19 14.12	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	04.30.19 14.12	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	04.30.19 14.12	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	04.30.19 14.12	U	1
Total BTEX		<0.00202	0.00202	mg/kg	04.30.19 14.12	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	70-130	04.30.19 14.12		
1,4-Difluorobenzene	540-36-3	98	%	70-130	04.30.19 14.12		



Certificate of Analytical Results 622388

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Fed. SWD

Sample Id: **FS07**
 Lab Sample Id: 622388-007

Matrix: Soil
 Date Collected: 04.23.19 15.45

Date Received: 04.26.19 11.30
 Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3087124

Date Prep: 04.26.19 17.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	208	4.98	mg/kg	04.26.19 22.59		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3087232

Date Prep: 04.27.19 15.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.28.19 20.28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.28.19 20.28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.28.19 20.28	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.28.19 20.28	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.28.19 20.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	04.28.19 20.28	
o-Terphenyl	84-15-1	84	%	70-135	04.28.19 20.28	



Certificate of Analytical Results 622388

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Fed. SWD

Sample Id: **FS07**
 Lab Sample Id: 622388-007

Matrix: Soil
 Date Collected: 04.23.19 15.45

Date Received: 04.26.19 11.30
 Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 04.30.19 08.45

Basis: Wet Weight

Seq Number: 3087479

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.30.19 14.31	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.30.19 14.31	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.30.19 14.31	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	04.30.19 14.31	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.30.19 14.31	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.30.19 14.31	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.30.19 14.31	U	1
		% Recovery					
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4		106	%	70-130	04.30.19 14.31	
1,4-Difluorobenzene	540-36-3		100	%	70-130	04.30.19 14.31	



Certificate of Analytical Results 622388

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Fed. SWD

Sample Id: **FS08**
 Lab Sample Id: 622388-008

Matrix: Soil
 Date Collected: 04.23.19 15.55

Date Received: 04.26.19 11.30
 Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3087124

Date Prep: 04.26.19 17.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	105	4.98	mg/kg	04.26.19 23.20		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3087232

Date Prep: 04.27.19 15.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.28.19 20.49	U	1
Diesel Range Organics (DRO)	C10C28DRO	15.6	15.0	mg/kg	04.28.19 20.49		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.28.19 20.49	U	1
Total TPH	PHC635	15.6	15.0	mg/kg	04.28.19 20.49		1
Total GRO-DRO	PHC628	15.6	15.0	mg/kg	04.28.19 20.49		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	04.28.19 20.49	
o-Terphenyl	84-15-1	89	%	70-135	04.28.19 20.49	



Certificate of Analytical Results 622388

LT Environmental, Inc., Arvada, CO

Nash Draw #8 Fed. SWD

Sample Id: **FS08**
 Lab Sample Id: 622388-008

Matrix: Soil
 Date Collected: 04.23.19 15.55

Date Received: 04.26.19 11.30
 Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 04.30.19 08.45

Basis: Wet Weight

Seq Number: 3087479

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.30.19 14.51	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.30.19 14.51	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.30.19 14.51	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.30.19 14.51	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.30.19 14.51	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.30.19 14.51	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.30.19 14.51	U	1
		% Recovery					
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4		101	%	70-130	04.30.19 14.51	
1,4-Difluorobenzene	540-36-3		100	%	70-130	04.30.19 14.51	



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



LT Environmental, Inc.

Nash Draw #8 Fed. SWD

Analytical Method: Chloride by EPA 300

Seq Number: 3087118

MB Sample Id: 7676642-1-BLK

Matrix: Solid

LCS Sample Id: 7676642-1-BKS

Prep Method: E300P

Date Prep: 04.26.19

LCSD Sample Id: 7676642-1-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	258	103	263	105	90-110	2	20	mg/kg	04.27.19 14:21	

Analytical Method: Chloride by EPA 300

Seq Number: 3087124

MB Sample Id: 7676645-1-BLK

Matrix: Solid

LCS Sample Id: 7676645-1-BKS

Prep Method: E300P

Date Prep: 04.26.19

LCSD Sample Id: 7676645-1-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	251	100	253	101	90-110	1	20	mg/kg	04.26.19 22:01	

Analytical Method: Chloride by EPA 300

Seq Number: 3087118

Parent Sample Id: 622382-010

Matrix: Soil

MS Sample Id: 622382-010 S

Prep Method: E300P

Date Prep: 04.26.19

MSD Sample Id: 622382-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	68.2	250	309	96	332	106	90-110	7	20	mg/kg	04.27.19 14:43	

Analytical Method: Chloride by EPA 300

Seq Number: 3087118

Parent Sample Id: 622382-012

Matrix: Soil

MS Sample Id: 622382-012 S

Prep Method: E300P

Date Prep: 04.26.19

MSD Sample Id: 622382-012 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	3.03	249	277	110	281	112	90-110	1	20	mg/kg	04.27.19 16:18	X

Analytical Method: Chloride by EPA 300

Seq Number: 3087124

Parent Sample Id: 622388-004

Matrix: Soil

MS Sample Id: 622388-004 S

Prep Method: E300P

Date Prep: 04.26.19

MSD Sample Id: 622388-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	92.7	253	334	95	337	97	90-110	1	20	mg/kg	04.26.19 22:30	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 $\text{Log Diff.} = \text{Log}(\text{Sample Duplicate}) - \text{Log}(\text{Original Sample})$

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



LT Environmental, Inc.

Nash Draw #8 Fed. SWD

Analytical Method: Chloride by EPA 300

Seq Number: 3087124

Parent Sample Id: 622389-006

Matrix: Soil

MS Sample Id: 622389-006 S

Prep Method: E300P

Date Prep: 04.26.19

MSD Sample Id: 622389-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	37.8	250	278	96	278	96	90-110	0	20	mg/kg	04.27.19 00:04	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3087232

MB Sample Id: 7676735-1-BLK

Matrix: Solid

LCS Sample Id: 7676735-1-BKS

Prep Method: TX1005P

Date Prep: 04.27.19

LCSD Sample Id: 7676735-1-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	944	94	917	92	70-135	3	20	mg/kg	04.28.19 13:39	
Diesel Range Organics (DRO)	<8.13	1000	856	86	861	86	70-135	1	20	mg/kg	04.28.19 13:39	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	84		96		88		70-135	%	04.28.19 13:39
o-Terphenyl	82		82		73		70-135	%	04.28.19 13:39

Analytical Method: TPH by SW8015 Mod

Seq Number: 3087232

Parent Sample Id: 622383-001

Matrix: Soil

MS Sample Id: 622383-001 S

Prep Method: TX1005P

Date Prep: 04.27.19

MSD Sample Id: 622383-001 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	871	87	902	90	70-135	3	20	mg/kg	04.28.19 14:40	
Diesel Range Organics (DRO)	<8.10	997	811	81	856	86	70-135	5	20	mg/kg	04.28.19 14:40	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	89		93		70-135	%	04.28.19 14:40
o-Terphenyl	76		78		70-135	%	04.28.19 14:40

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C-A) / B$
 $RPD = 200 * |(C-E) / (C+E)|$
 $[D] = 100 * (C) / [B]$
 $\text{Log Diff.} = \text{Log}(\text{Sample Duplicate}) - \text{Log}(\text{Original Sample})$

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



LT Environmental, Inc.

Nash Draw #8 Fed. SWD

Analytical Method: BTEX by EPA 8021B

Seq Number: 3087479

MB Sample Id: 7676887-1-BLK

Matrix: Solid

LCS Sample Id: 7676887-1-BKS

Prep Method: SW5030B

Date Prep: 04.30.19

LCSD Sample Id: 7676887-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000384	0.0998	0.113	113	0.112	112	70-130	1	35	mg/kg	04.30.19 22:14	
Toluene	<0.000455	0.0998	0.107	107	0.107	107	70-130	0	35	mg/kg	04.30.19 22:14	
Ethylbenzene	<0.000564	0.0998	0.114	114	0.113	113	70-130	1	35	mg/kg	04.30.19 22:14	
m,p-Xylenes	<0.00101	0.200	0.239	120	0.237	119	70-130	1	35	mg/kg	04.30.19 22:14	
o-Xylene	<0.000344	0.0998	0.117	117	0.116	116	70-130	1	35	mg/kg	04.30.19 22:14	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	88		101		101		70-130	%	04.30.19 22:14
4-Bromofluorobenzene	85		105		102		70-130	%	04.30.19 22:14

Analytical Method: BTEX by EPA 8021B

Seq Number: 3087479

Parent Sample Id: 622388-001

Matrix: Soil

MS Sample Id: 622388-001 S

Prep Method: SW5030B

Date Prep: 04.30.19

MSD Sample Id: 622388-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000383	0.0994	0.106	107	0.107	106	70-130	1	35	mg/kg	04.30.19 22:52	
Toluene	<0.000453	0.0994	0.0999	101	0.103	102	70-130	3	35	mg/kg	04.30.19 22:52	
Ethylbenzene	<0.000561	0.0994	0.104	105	0.110	109	70-130	6	35	mg/kg	04.30.19 22:52	
m,p-Xylenes	<0.00101	0.199	0.218	110	0.231	114	70-130	6	35	mg/kg	04.30.19 22:52	
o-Xylene	<0.000342	0.0994	0.107	108	0.114	113	70-130	6	35	mg/kg	04.30.19 22:52	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		99		70-130	%	04.30.19 22:52
4-Bromofluorobenzene	102		111		70-130	%	04.30.19 22:52

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C-A) / B$
 $RPD = 200 * |(C-E) / (C+E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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



Chain of Custody

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

Work Order No:

1022388

Hobbs, NM (575-392-7550) Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (813-620-2000)

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Page 1 of 1

Project Manager:	Ashley Ager	Bill to: (if different)	Kyle Littlell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	970.385.1096	Email:	lbellell@ltenv.com

Work Order Comments	
Program: UST/PST	☐ PRP ☐ Brownfields ☐ RC ☐ Superfund
State of Project:	
Reporting Level I	☐ Level III ☐ ST/UST ☐ RRP ☐ Level IV
Deliverables: EDD	☐ ADAPT ☐ Other:

Project Name:	Neish Dr. #8 Feb. SWD	Turn Around	
Project Number:	288-5007	Routine	☒
P.O. Number:		Rush:	
Sampler's Name:	Benjamin Beill	Due Date:	

SAMPLE RECEIPT		Temp Blank:	Yes ☐ No ☒	Wet Ice:	Yes ☐ No ☒
Temperature (°C):	3.43.0	Thermometer ID	RB		
Received Intact:	Yes ☒ No ☐	Correction Factor:	-0.1		
Cooler Custody Seals:	Yes ☒ No ☐	Total Containers:			
Sample Custody Seals:	Yes ☒ No ☐				

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)	ANALYSIS REQUEST	Work Order Notes
PH01	S	4/6/19	10:10	0.5'	1	X	X	X		
PH01A			10:25	1'	1	X	X	X		Discrete Type
PH02			10:30	0.5'	1	X	X	X		
PH02A			10:50	1'	1	X	X	X		
PH03			11:10	0.5'	1	X	X	X		
PH03A			11:15	1'	1	X	X	X		
FS07			15:45	2'	1	X	X	X		
FS08			15:55	2'	1	X	X	X		Composite Type

Total 200.7 / 6010 200.8 / 6020:

Circle Method(s) and Metal(s) to be analyzed

8RCRA 13PPM Texas 11 AI Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn
TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U

1631 / 245.1 / 7470 / 7471 : Hg

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>[Signature]</i>	04/25/19 12:33	<i>[Signature]</i>	<i>[Signature]</i>	4/25/19 14:00



Client: LT Environmental, Inc.

Date/ Time Received: 04/26/2019 11:30:00 AM

Work Order #: 622388

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)?	3
#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)?	No
#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:

Katie Lowe

Date: 04/26/2019

Checklist reviewed by:

Jessica Kramer

Date: 04/29/2019

Analytical Report 622976

for
LT Environmental, Inc.

Project Manager: Ashley Ager

Nash Darw 8 Fed SWD

2RP-5007

07-MAY-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)

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)



07-MAY-19

Project Manager: **Ashley Ager**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **622976**

Nash Darw 8 Fed SWD

Project Address: Delaware Basin

Ashley Ager:

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) 622976. 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. 622976 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,

A handwritten signature in black ink that reads '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 622976****LT Environmental, Inc., Arvada, CO**

Nash Darw 8 Fed SWD

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS09	S	04-25-19 09:50	1.5 - 2 ft	622976-001
FS10	S	04-25-19 10:10	2 ft	622976-002
FS11	S	04-25-19 10:15	2 ft	622976-003



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Nash Darw 8 Fed SWD

Project ID: 2RP-5007
Work Order Number(s): 622976

Report Date: 07-MAY-19
Date Received: 05/02/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3087784 BTEX by EPA 8021B

Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected.

Samples affected are: 622976-003.

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



Certificate of Analysis Summary 622976

LT Environmental, Inc., Arvada, CO

Project Name: Nash Darw 8 Fed SWD

Project Id: 2RP-5007
Contact: Ashley Ager
Project Location: Delaware Basin

Date Received in Lab: Thu May-02-19 11:05 am
Report Date: 07-MAY-19
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	622976-001	622976-002	622976-003			
	<i>Field Id:</i>	FS09	FS10	FS11			
	<i>Depth:</i>	1.5-2 ft	2- ft	2- ft			
	<i>Matrix:</i>	SOIL	SOIL	SOIL			
	<i>Sampled:</i>	Apr-25-19 09:50	Apr-25-19 10:10	Apr-25-19 10:15			
BTEX by EPA 8021B	<i>Extracted:</i>	May-02-19 16:45	May-02-19 16:45	May-02-19 16:45			
	<i>Analyzed:</i>	May-03-19 06:19	May-03-19 06:38	May-03-19 06:57			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL			
Benzene		<0.00199 0.00199	<0.00202 0.00202	<0.00200 0.00200			
Toluene		<0.00199 0.00199	<0.00202 0.00202	<0.00200 0.00200			
Ethylbenzene		<0.00199 0.00199	<0.00202 0.00202	<0.00200 0.00200			
m,p-Xylenes		<0.00398 0.00398	<0.00403 0.00403	<0.00400 0.00400			
o-Xylene		<0.00199 0.00199	<0.00202 0.00202	<0.00200 0.00200			
Total Xylenes		<0.00199 0.00199	<0.00202 0.00202	<0.00200 0.00200			
Total BTEX		<0.00199 0.00199	<0.00202 0.00202	<0.00200 0.00200			
Chloride by EPA 300	<i>Extracted:</i>	May-02-19 15:30	May-02-19 15:30	May-02-19 15:30			
	<i>Analyzed:</i>	May-02-19 18:44	May-02-19 18:50	May-02-19 18:56			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL			
Chloride		113 4.97	104 4.99	113 4.96			
TPH by SW8015 Mod	<i>Extracted:</i>	May-04-19 08:00	May-04-19 08:00	May-04-19 08:00			
	<i>Analyzed:</i>	May-04-19 20:40	May-05-19 08:46	May-04-19 21:21			
	<i>Units/RL:</i>	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			
Diesel Range Organics (DRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0			
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0			
Total TPH		<15.0 15.0	<15.0 15.0	<15.0 15.0			
Total GRO-DRO		<15.0 15.0	<15.0 15.0	<15.0 15.0			

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

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

Version: 1.0%

Jessica Kramer
Project Assistant



Certificate of Analytical Results 622976

LT Environmental, Inc., Arvada, CO

Nash Darw 8 Fed SWD

Sample Id: **FS09**
 Lab Sample Id: 622976-001

Matrix: Soil
 Date Collected: 04.25.19 09.50

Date Received: 05.02.19 11.05
 Sample Depth: 1.5 - 2 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3087821

Date Prep: 05.02.19 15.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	113	4.97	mg/kg	05.02.19 18.44		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3088043

Date Prep: 05.04.19 08.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.04.19 20.40	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.04.19 20.40	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.04.19 20.40	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.04.19 20.40	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.04.19 20.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	05.04.19 20.40	
o-Terphenyl	84-15-1	100	%	70-135	05.04.19 20.40	



Certificate of Analytical Results 622976

LT Environmental, Inc., Arvada, CO

Nash Darw 8 Fed SWD

Sample Id: **FS09**
 Lab Sample Id: 622976-001

Matrix: Soil
 Date Collected: 04.25.19 09.50

Date Received: 05.02.19 11.05
 Sample Depth: 1.5 - 2 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3087784

Date Prep: 05.02.19 16.45

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	05.03.19 06.19	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	05.03.19 06.19	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	05.03.19 06.19	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	05.03.19 06.19	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	05.03.19 06.19	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	05.03.19 06.19	U	1
Total BTEX		<0.00199	0.00199	mg/kg	05.03.19 06.19	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	118	%	70-130	05.03.19 06.19		
1,4-Difluorobenzene	540-36-3	102	%	70-130	05.03.19 06.19		



Certificate of Analytical Results 622976

LT Environmental, Inc., Arvada, CO

Nash Darw 8 Fed SWD

Sample Id: **FS10** Matrix: Soil Date Received: 05.02.19 11.05
 Lab Sample Id: 622976-002 Date Collected: 04.25.19 10.10 Sample Depth: 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 05.02.19 15.30 Basis: Wet Weight
 Seq Number: 3087821

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	104	4.99	mg/kg	05.02.19 18.50		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 05.04.19 08.00 Basis: Wet Weight
 Seq Number: 3088043

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.05.19 08.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.05.19 08.46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.05.19 08.46	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.05.19 08.46	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.05.19 08.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	116	%	70-135	05.05.19 08.46	
o-Terphenyl	84-15-1	115	%	70-135	05.05.19 08.46	



Certificate of Analytical Results 622976

LT Environmental, Inc., Arvada, CO

Nash Darw 8 Fed SWD

Sample Id: **FS10**
 Lab Sample Id: 622976-002

Matrix: Soil
 Date Collected: 04.25.19 10.10

Date Received: 05.02.19 11.05
 Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3087784

Date Prep: 05.02.19 16.45

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	05.03.19 06.38	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	05.03.19 06.38	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	05.03.19 06.38	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	05.03.19 06.38	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	05.03.19 06.38	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	05.03.19 06.38	U	1
Total BTEX		<0.00202	0.00202	mg/kg	05.03.19 06.38	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	102	%	70-130	05.03.19 06.38		
4-Bromofluorobenzene	460-00-4	119	%	70-130	05.03.19 06.38		



Certificate of Analytical Results 622976

LT Environmental, Inc., Arvada, CO

Nash Darw 8 Fed SWD

Sample Id: **FS11** Matrix: Soil Date Received: 05.02.19 11.05
 Lab Sample Id: 622976-003 Date Collected: 04.25.19 10.15 Sample Depth: 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 05.02.19 15.30 Basis: Wet Weight
 Seq Number: 3087821

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	113	4.96	mg/kg	05.02.19 18.56		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 05.04.19 08.00 Basis: Wet Weight
 Seq Number: 3088043

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.04.19 21.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.04.19 21.21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.04.19 21.21	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.04.19 21.21	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.04.19 21.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	05.04.19 21.21	
o-Terphenyl	84-15-1	97	%	70-135	05.04.19 21.21	



Certificate of Analytical Results 622976

LT Environmental, Inc., Arvada, CO

Nash Darw 8 Fed SWD

Sample Id: **FS11**
 Lab Sample Id: 622976-003

Matrix: Soil
 Date Collected: 04.25.19 10.15

Date Received: 05.02.19 11.05
 Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3087784

Date Prep: 05.02.19 16.45

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	05.03.19 06.57	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.03.19 06.57	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.03.19 06.57	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	05.03.19 06.57	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.03.19 06.57	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.03.19 06.57	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.03.19 06.57	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	153	%	70-130	05.03.19 06.57	**	
1,4-Difluorobenzene	540-36-3	102	%	70-130	05.03.19 06.57		



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



LT Environmental, Inc.

Nash Darw 8 Fed SWD

Analytical Method: Chloride by EPA 300

Seq Number: 3087821

MB Sample Id: 7677052-1-BLK

Matrix: Solid

LCS Sample Id: 7677052-1-BKS

Prep Method: E300P

Date Prep: 05.02.19

LCSD Sample Id: 7677052-1-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	256	102	258	103	90-110	1	20	mg/kg	05.02.19 18:08	

Analytical Method: Chloride by EPA 300

Seq Number: 3087821

Parent Sample Id: 622975-005

Matrix: Soil

MS Sample Id: 622975-005 S

Prep Method: E300P

Date Prep: 05.02.19

MSD Sample Id: 622975-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	261	252	484	88	490	91	90-110	1	20	mg/kg	05.02.19 18:26	X

Analytical Method: Chloride by EPA 300

Seq Number: 3087821

Parent Sample Id: 622979-006

Matrix: Soil

MS Sample Id: 622979-006 S

Prep Method: E300P

Date Prep: 05.02.19

MSD Sample Id: 622979-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	5.03	253	253	98	266	103	90-110	5	20	mg/kg	05.02.19 19:49	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3088043

MB Sample Id: 7677203-1-BLK

Matrix: Solid

LCS Sample Id: 7677203-1-BKS

Prep Method: TX1005P

Date Prep: 05.04.19

LCSD Sample Id: 7677203-1-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	1010	101	1040	104	70-135	3	20	mg/kg	05.04.19 12:51	
Diesel Range Organics (DRO)	<8.13	1000	1010	101	1070	107	70-135	6	20	mg/kg	05.04.19 12:51	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	124		127		122		70-135	%	05.04.19 12:51
o-Terphenyl	127		125		126		70-135	%	05.04.19 12:51

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 $\text{Log Diff.} = \text{Log}(\text{Sample Duplicate}) - \text{Log}(\text{Original Sample})$

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



LT Environmental, Inc.

Nash Darw 8 Fed SWD

Analytical Method: TPH by SW8015 Mod

Seq Number: 3088043

Parent Sample Id: 623108-001

Matrix: Soil

MS Sample Id: 623108-001 S

Prep Method: TX1005P

Date Prep: 05.04.19

MSD Sample Id: 623108-001 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	1010	101	1010	101	70-135	0	20	mg/kg	05.04.19 13:52	
Diesel Range Organics (DRO)	148	997	1090	94	1080	93	70-135	1	20	mg/kg	05.04.19 13:52	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	124		127		70-135	%	05.04.19 13:52
o-Terphenyl	107		109		70-135	%	05.04.19 13:52

Analytical Method: BTEX by EPA 8021B

Seq Number: 3087784

MB Sample Id: 7677041-1-BLK

Matrix: Solid

LCS Sample Id: 7677041-1-BKS

Prep Method: SW5030B

Date Prep: 05.02.19

LCSD Sample Id: 7677041-1-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	0.0945	95	0.0994	100	70-130	5	35	mg/kg	05.03.19 02:52	
Toluene	<0.00200	0.100	0.0915	92	0.0950	96	70-130	4	35	mg/kg	05.03.19 02:52	
Ethylbenzene	<0.00200	0.100	0.0993	99	0.102	103	70-130	3	35	mg/kg	05.03.19 02:52	
m,p-Xylenes	<0.00400	0.200	0.205	103	0.211	106	70-130	3	35	mg/kg	05.03.19 02:52	
o-Xylene	<0.00200	0.100	0.102	102	0.105	106	70-130	3	35	mg/kg	05.03.19 02:52	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		95		95		70-130	%	05.03.19 02:52
4-Bromofluorobenzene	102		107		107		70-130	%	05.03.19 02:52

Analytical Method: BTEX by EPA 8021B

Seq Number: 3087784

Parent Sample Id: 622975-002

Matrix: Soil

MS Sample Id: 622975-002 S

Prep Method: SW5030B

Date Prep: 05.02.19

MSD Sample Id: 622975-002 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	0.0962	97	0.0967	97	70-130	1	35	mg/kg	05.03.19 03:30	
Toluene	<0.00199	0.0996	0.0913	92	0.0911	91	70-130	0	35	mg/kg	05.03.19 03:30	
Ethylbenzene	<0.00199	0.0996	0.0969	97	0.0960	96	70-130	1	35	mg/kg	05.03.19 03:30	
m,p-Xylenes	<0.00398	0.199	0.200	101	0.199	99	70-130	1	35	mg/kg	05.03.19 03:30	
o-Xylene	<0.00199	0.0996	0.0996	100	0.0990	99	70-130	1	35	mg/kg	05.03.19 03:30	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	97		97		70-130	%	05.03.19 03:30
4-Bromofluorobenzene	107		107		70-130	%	05.03.19 03:30

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C-A) / B$
 $RPD = 200 * |(C-E) / (C+E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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



Chain of Custody

Work Order No:

10/20/24

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)

www.xenco.com Page 1 of 1

Project Manager:		Ashley Ager		Bill to: (if different)		Kyle Littrell	
Company Name:		LT Environmental, Inc., Permian office		Company Name:		XTO Energy	
Address:		3300 North A Street		Address:		3104 E Green Street	
City, State ZIP:		Midland, TX 79705		City, State ZIP:		Carlsbad, NM 88220	
Phone:		970.385.1096		Email:		bbelliii@ltenv.com	

Work Order Comments							
Program: UST/PST ☐ PRP ☐ brownfields ☐ RC ☐ unpertund ☐							
State of Project:							
Reporting: Level II ☐ Level III ☐ PST/UST ☐ RRP ☐ Level IV ☐							
Deliverables: EDD ☐ ADAPT ☐ Other: ☐							

[illegible][illegible]

ORIGIN ID: CNOA (281) 240-4200
SAMPLE CUSTODY
XENCO LABORATORIES NM
1089 N CANAL ST
CARLSBAD, NM 88220
UNITED STATES US

SHIP DATE: 01MAY19
ACTWGT: 56.00 LB
CAD: 114488676/INET4100
DIMS: 24x14x14 IN

BILL SENDER

TO SAMPLE RECEIVING

3600 S COUNTY ROAD 1276

MIDLAND TX 79706

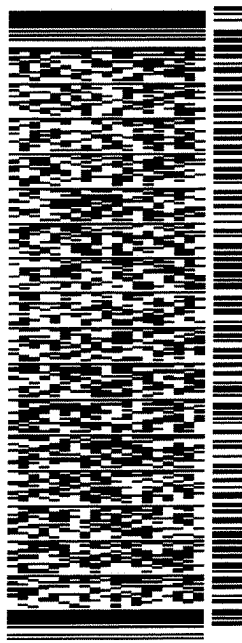
REF: (432) 704-5440

REF:

PO:

DEPT:

565J1/D66C/23AD

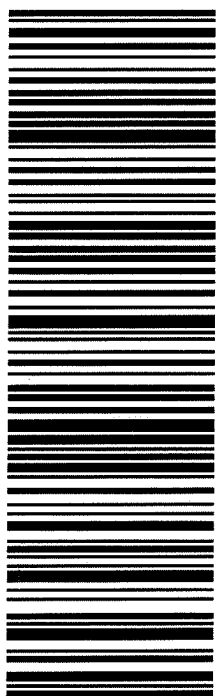


TRK# 7751 1156 8166
0201

THU - 02 MAY HOLD
PRIORITY OVERNIGHT

41 MAFA

HLD
79706
TX-US LBB



After printing this label:

1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
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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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Client: LT Environmental, Inc.

Date/ Time Received: 05/02/2019 11:05:00 AM

Work Order #: 622976

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)?	.3
#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: 05/02/2019

Checklist reviewed by:

Jessica Kramer

Date: 05/02/2019

Analytical Report 623937

for
LT Environmental, Inc.

Project Manager: Ashley Ager

Nash Draw 8 SWD #1

012918153

13-MAY-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)

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)



13-MAY-19

Project Manager: **Ashley Ager**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **623937**

Nash Draw 8 SWD #1

Project Address: Delaware Basin

Ashley Ager:

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) 623937. 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. 623937 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,

A handwritten signature in black ink that reads 'Kalei Stout'.

Kalei Stout

Midland Laboratory Director

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

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A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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**Sample Cross Reference 623937****LT Environmental, Inc., Arvada, CO**

Nash Draw 8 SWD #1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH04	S	05-09-19 09:50	0.5 ft	623937-001
PH04A	S	05-09-19 10:05	2 ft	623937-002
PH05	S	05-09-19 10:40	1 ft	623937-003
PH05A	S	05-09-19 10:45	2 ft	623937-004
PH06	S	05-09-19 12:40	0.5 ft	623937-005
PH06A	S	05-09-19 13:00	2 ft	623937-006

**CASE NARRATIVE****Client Name: LT Environmental, Inc.****Project Name: Nash Draw 8 SWD #1**Project ID: 012918153
Work Order Number(s): 623937Report Date: 13-MAY-19
Date Received: 05/10/2019**Sample receipt non conformances and comments:**

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3088828 BTEX by EPA 8021B

Lab Sample ID 623937-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 623937-001, -002, -003, -004, -005, -006.

The Laboratory Control Sample for Toluene, Benzene, m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.

Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene Relative Percent Difference (RPD) between matrix spike and duplicate were above quality control limits.

Samples in the analytical batch are: 623937-001, -002, -003, -004, -005, -006

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



Certificate of Analysis Summary 623937

LT Environmental, Inc., Arvada, CO

Project Name: Nash Draw 8 SWD #1

Project Id: 012918153
Contact: Ashley Ager
Project Location: Delaware Basin

Date Received in Lab: Fri May-10-19 11:00 am
Report Date: 13-MAY-19
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	623937-001	623937-002	623937-003	623937-004	623937-005	623937-006
	<i>Field Id:</i>	PH04	PH04A	PH05	PH05A	PH06	PH06A
	<i>Depth:</i>	0.5- ft	2- ft	1- ft	2- ft	0.5- ft	2- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	May-09-19 09:50	May-09-19 10:05	May-09-19 10:40	May-09-19 10:45	May-09-19 12:40	May-09-19 13:00
BTEX by EPA 8021B	<i>Extracted:</i>	May-10-19 11:15	May-10-19 11:15	May-10-19 11:15	May-10-19 11:15	May-10-19 11:15	May-10-19 11:15
	<i>Analyzed:</i>	May-10-19 15:46	May-10-19 16:05	May-10-19 16:24	May-10-19 16:43	May-10-19 17:02	May-10-19 17:21
	<i>Units/RL:</i>	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	<0.00201 0.00201	<0.00199 0.00199	<0.00202 0.00202
Toluene		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199	<0.00202 0.00202
Ethylbenzene		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199	<0.00202 0.00202
m,p-Xylenes		<0.00398 0.00398	<0.00401 0.00401	<0.00400 0.00400	<0.00402 0.00402	<0.00398 0.00398	<0.00403 0.00403
o-Xylene		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199	<0.00202 0.00202
Total Xylenes		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199	<0.00202 0.00202
Total BTEX		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199	<0.00202 0.00202
Chloride by EPA 300	<i>Extracted:</i>	May-11-19 11:00	May-11-19 11:00	May-11-19 11:00	May-11-19 11:00	May-11-19 11:00	May-11-19 11:00
	<i>Analyzed:</i>	May-11-19 14:05	May-11-19 14:10	May-11-19 14:16	May-11-19 14:21	May-11-19 14:26	May-11-19 14:31
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		307 4.97	184 4.96	265 5.01	36.2 4.99	247 4.99	21.5 5.02
TPH by SW8015 Mod	<i>Extracted:</i>	May-10-19 17:00	May-10-19 17:00	May-10-19 17:00	May-10-19 17:00	May-10-19 17:00	May-10-19 17:00
	<i>Analyzed:</i>	May-10-19 23:00	May-11-19 00:01	May-11-19 00:21	May-11-19 00:41	May-11-19 01:01	May-11-19 01:22
	<i>Units/RL:</i>	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	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Diesel Range Organics (DRO)		<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Total TPH		<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Total GRO-DRO		<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0

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

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

Kalei Stout
Midland Laboratory Director



Certificate of Analytical Results 623937

LT Environmental, Inc., Arvada, CO

Nash Draw 8 SWD #1

Sample Id: **PH04**
 Lab Sample Id: 623937-001

Matrix: Soil
 Date Collected: 05.09.19 09.50

Date Received: 05.10.19 11.00
 Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3088755

Date Prep: 05.11.19 11.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	307	4.97	mg/kg	05.11.19 14.05		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3088790

Date Prep: 05.10.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.10.19 23.00	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.10.19 23.00	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.10.19 23.00	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.10.19 23.00	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.10.19 23.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	05.10.19 23.00	
o-Terphenyl	84-15-1	103	%	70-135	05.10.19 23.00	



Certificate of Analytical Results 623937

LT Environmental, Inc., Arvada, CO

Nash Draw 8 SWD #1

Sample Id: **PH04**
 Lab Sample Id: 623937-001

Matrix: Soil
 Date Collected: 05.09.19 09.50

Date Received: 05.10.19 11.00
 Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3088828

Prep Method: SW5030B

% Moisture:

Date Prep: 05.10.19 11.15

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	05.10.19 15.46	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	05.10.19 15.46	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	05.10.19 15.46	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	05.10.19 15.46	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	05.10.19 15.46	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	05.10.19 15.46	U	1
Total BTEX		<0.00199	0.00199	mg/kg	05.10.19 15.46	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	89	%	70-130	05.10.19 15.46		
1,4-Difluorobenzene	540-36-3	99	%	70-130	05.10.19 15.46		



Certificate of Analytical Results 623937

LT Environmental, Inc., Arvada, CO

Nash Draw 8 SWD #1

Sample Id: **PH04A**
 Lab Sample Id: 623937-002

Matrix: Soil
 Date Collected: 05.09.19 10.05

Date Received: 05.10.19 11.00
 Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3088755

Date Prep: 05.11.19 11.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	184	4.96	mg/kg	05.11.19 14.10		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3088790

Date Prep: 05.10.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	05.11.19 00.01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	05.11.19 00.01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	05.11.19 00.01	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	05.11.19 00.01	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	05.11.19 00.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	05.11.19 00.01	
o-Terphenyl	84-15-1	104	%	70-135	05.11.19 00.01	



Certificate of Analytical Results 623937

LT Environmental, Inc., Arvada, CO

Nash Draw 8 SWD #1

Sample Id: **PH04A**
 Lab Sample Id: 623937-002

Matrix: Soil
 Date Collected: 05.09.19 10.05

Date Received: 05.10.19 11.00
 Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 05.10.19 11.15

Basis: Wet Weight

Seq Number: 3088828

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.10.19 16.05	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.10.19 16.05	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.10.19 16.05	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	05.10.19 16.05	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.10.19 16.05	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.10.19 16.05	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.10.19 16.05	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	82	%	70-130	05.10.19 16.05		
1,4-Difluorobenzene	540-36-3	100	%	70-130	05.10.19 16.05		



Certificate of Analytical Results 623937

LT Environmental, Inc., Arvada, CO

Nash Draw 8 SWD #1

Sample Id: **PH05** Matrix: Soil Date Received: 05.10.19 11.00
 Lab Sample Id: 623937-003 Date Collected: 05.09.19 10.40 Sample Depth: 1 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: SPC % Moisture:
 Analyst: SPC Date Prep: 05.11.19 11.00 Basis: Wet Weight
 Seq Number: 3088755

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	265	5.01	mg/kg	05.11.19 14.16		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 05.10.19 17.00 Basis: Wet Weight
 Seq Number: 3088790

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.11.19 00.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.11.19 00.21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.11.19 00.21	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.11.19 00.21	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.11.19 00.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	05.11.19 00.21	
o-Terphenyl	84-15-1	99	%	70-135	05.11.19 00.21	



Certificate of Analytical Results 623937

LT Environmental, Inc., Arvada, CO

Nash Draw 8 SWD #1

Sample Id: **PH05**
 Lab Sample Id: 623937-003

Matrix: Soil
 Date Collected: 05.09.19 10.40

Date Received: 05.10.19 11.00
 Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 05.10.19 11.15

Basis: Wet Weight

Seq Number: 3088828

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.10.19 16.24	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.10.19 16.24	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.10.19 16.24	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	05.10.19 16.24	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.10.19 16.24	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.10.19 16.24	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.10.19 16.24	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	104	%	70-130	05.10.19 16.24		
4-Bromofluorobenzene	460-00-4	88	%	70-130	05.10.19 16.24		



Certificate of Analytical Results 623937

LT Environmental, Inc., Arvada, CO

Nash Draw 8 SWD #1

Sample Id: **PH05A**
 Lab Sample Id: 623937-004

Matrix: Soil
 Date Collected: 05.09.19 10.45

Date Received: 05.10.19 11.00
 Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3088755

Date Prep: 05.11.19 11.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	36.2	4.99	mg/kg	05.11.19 14.21		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3088790

Date Prep: 05.10.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.11.19 00.41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.11.19 00.41	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.11.19 00.41	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.11.19 00.41	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.11.19 00.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	05.11.19 00.41	
o-Terphenyl	84-15-1	100	%	70-135	05.11.19 00.41	



Certificate of Analytical Results 623937

LT Environmental, Inc., Arvada, CO

Nash Draw 8 SWD #1

Sample Id: **PH05A**
 Lab Sample Id: 623937-004

Matrix: Soil
 Date Collected: 05.09.19 10.45

Date Received: 05.10.19 11.00
 Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 05.10.19 11.15

Basis: Wet Weight

Seq Number: 3088828

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	05.10.19 16.43	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	05.10.19 16.43	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	05.10.19 16.43	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	05.10.19 16.43	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	05.10.19 16.43	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	05.10.19 16.43	U	1
Total BTEX		<0.00201	0.00201	mg/kg	05.10.19 16.43	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	79	%	70-130	05.10.19 16.43		
1,4-Difluorobenzene	540-36-3	101	%	70-130	05.10.19 16.43		



Certificate of Analytical Results 623937

LT Environmental, Inc., Arvada, CO

Nash Draw 8 SWD #1

Sample Id: **PH06** Matrix: Soil Date Received: 05.10.19 11.00
 Lab Sample Id: 623937-005 Date Collected: 05.09.19 12.40 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: SPC % Moisture:
 Analyst: SPC Date Prep: 05.11.19 11.00 Basis: Wet Weight
 Seq Number: 3088755

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	247	4.99	mg/kg	05.11.19 14.26		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 05.10.19 17.00 Basis: Wet Weight
 Seq Number: 3088790

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.11.19 01.01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.11.19 01.01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.11.19 01.01	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.11.19 01.01	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.11.19 01.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	05.11.19 01.01	
o-Terphenyl	84-15-1	101	%	70-135	05.11.19 01.01	



Certificate of Analytical Results 623937

LT Environmental, Inc., Arvada, CO

Nash Draw 8 SWD #1

Sample Id: **PH06**
 Lab Sample Id: 623937-005

Matrix: Soil
 Date Collected: 05.09.19 12.40

Date Received: 05.10.19 11.00
 Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 05.10.19 11.15

Basis: Wet Weight

Seq Number: 3088828

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	05.10.19 17.02	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	05.10.19 17.02	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	05.10.19 17.02	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	05.10.19 17.02	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	05.10.19 17.02	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	05.10.19 17.02	U	1
Total BTEX		<0.00199	0.00199	mg/kg	05.10.19 17.02	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	101	%	70-130	05.10.19 17.02		
4-Bromofluorobenzene	460-00-4	87	%	70-130	05.10.19 17.02		



Certificate of Analytical Results 623937

LT Environmental, Inc., Arvada, CO

Nash Draw 8 SWD #1

Sample Id: **PH06A** Matrix: Soil Date Received: 05.10.19 11.00
 Lab Sample Id: 623937-006 Date Collected: 05.09.19 13.00 Sample Depth: 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: SPC % Moisture:
 Analyst: SPC Date Prep: 05.11.19 11.00 Basis: Wet Weight
 Seq Number: 3088755

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	21.5	5.02	mg/kg	05.11.19 14.31		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 05.10.19 17.00 Basis: Wet Weight
 Seq Number: 3088790

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.11.19 01.22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.11.19 01.22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.11.19 01.22	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.11.19 01.22	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.11.19 01.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	05.11.19 01.22	
o-Terphenyl	84-15-1	103	%	70-135	05.11.19 01.22	



Certificate of Analytical Results 623937

LT Environmental, Inc., Arvada, CO

Nash Draw 8 SWD #1

Sample Id: **PH06A**
 Lab Sample Id: 623937-006

Matrix: Soil
 Date Collected: 05.09.19 13.00

Date Received: 05.10.19 11.00
 Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3088828

Date Prep: 05.10.19 11.15

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	05.10.19 17.21	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	05.10.19 17.21	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	05.10.19 17.21	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	05.10.19 17.21	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	05.10.19 17.21	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	05.10.19 17.21	U	1
Total BTEX		<0.00202	0.00202	mg/kg	05.10.19 17.21	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	85	%	70-130	05.10.19 17.21		
1,4-Difluorobenzene	540-36-3	101	%	70-130	05.10.19 17.21		



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



LT Environmental, Inc.

Nash Draw 8 SWD #1

Analytical Method: Chloride by EPA 300

Seq Number: 3088755

MB Sample Id: 7677656-1-BLK

Matrix: Solid

LCS Sample Id: 7677656-1-BKS

Prep Method: E300P

Date Prep: 05.11.19

LCSD Sample Id: 7677656-1-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	239	96	239	96	90-110	0	20	mg/kg	05.11.19 12:07	

Analytical Method: Chloride by EPA 300

Seq Number: 3088755

Parent Sample Id: 623945-001

Matrix: Soil

MS Sample Id: 623945-001 S

Prep Method: E300P

Date Prep: 05.11.19

MSD Sample Id: 623945-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	145	250	364	88	364	88	90-110	0	20	mg/kg	05.11.19 12:22	X

Analytical Method: Chloride by EPA 300

Seq Number: 3088755

Parent Sample Id: 623945-011

Matrix: Soil

MS Sample Id: 623945-011 S

Prep Method: E300P

Date Prep: 05.11.19

MSD Sample Id: 623945-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	653	250	776	49	780	51	90-110	1	20	mg/kg	05.11.19 13:34	X

Analytical Method: TPH by SW8015 Mod

Seq Number: 3088790

MB Sample Id: 7677670-1-BLK

Matrix: Solid

LCS Sample Id: 7677670-1-BKS

Prep Method: TX1005P

Date Prep: 05.10.19

LCSD Sample Id: 7677670-1-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	962	96	996	100	70-135	3	20	mg/kg	05.10.19 22:20	
Diesel Range Organics (DRO)	<8.13	1000	974	97	1020	102	70-135	5	20	mg/kg	05.10.19 22:20	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	95		125		125		70-135	%	05.10.19 22:20
o-Terphenyl	96		122		128		70-135	%	05.10.19 22:20

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C-A) / B$
 $RPD = 200 * |(C-E) / (C+E)|$
 $[D] = 100 * (C) / [B]$
 Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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



LT Environmental, Inc.

Nash Draw 8 SWD #1

Analytical Method: TPH by SW8015 Mod

Seq Number: 3088790

Parent Sample Id: 623937-001

Matrix: Soil

MS Sample Id: 623937-001 S

Prep Method: TX1005P

Date Prep: 05.10.19

MSD Sample Id: 623937-001 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)	<7.99	999	1010	101	1030	103	70-135	2	20	mg/kg	05.10.19 23:19	
Diesel Range Organics (DRO)	<8.12	999	1040	104	1050	105	70-135	1	20	mg/kg	05.10.19 23:19	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	126		127		70-135	%	05.10.19 23:19
o-Terphenyl	127		122		70-135	%	05.10.19 23:19

Analytical Method: BTEX by EPA 8021B

Seq Number: 3088828

MB Sample Id: 7677732-1-BLK

Matrix: Solid

LCS Sample Id: 7677732-1-BKS

Prep Method: SW5030B

Date Prep: 05.10.19

LCSD Sample Id: 7677732-1-BSO

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000383	0.0994	0.117	118	0.123	122	70-130	5	35	mg/kg	05.10.19 13:52	
Toluene	<0.000453	0.0994	0.108	109	0.113	112	70-130	5	35	mg/kg	05.10.19 13:52	
Ethylbenzene	<0.000561	0.0994	0.114	115	0.120	119	70-130	5	35	mg/kg	05.10.19 13:52	
m,p-Xylenes	<0.00101	0.199	0.237	119	0.250	124	70-130	5	35	mg/kg	05.10.19 13:52	
o-Xylene	<0.000342	0.0994	0.114	115	0.121	120	70-130	6	35	mg/kg	05.10.19 13:52	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	91		103		104		70-130	%	05.10.19 13:52
4-Bromofluorobenzene	76		86		87		70-130	%	05.10.19 13:52

Analytical Method: BTEX by EPA 8021B

Seq Number: 3088828

Parent Sample Id: 623937-001

Matrix: Soil

MS Sample Id: 623937-001 S

Prep Method: SW5030B

Date Prep: 05.10.19

MSD Sample Id: 623937-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000387	0.101	0.105	104	0.0641	64	70-130	48	35	mg/kg	05.10.19 14:30	XF
Toluene	<0.000458	0.101	0.0969	96	0.0564	57	70-130	53	35	mg/kg	05.10.19 14:30	XF
Ethylbenzene	<0.000568	0.101	0.102	101	0.0565	57	70-130	57	35	mg/kg	05.10.19 14:30	XF
m,p-Xylenes	<0.00102	0.201	0.210	104	0.116	58	70-130	58	35	mg/kg	05.10.19 14:30	XF
o-Xylene	0.000388	0.101	0.101	100	0.0557	55	70-130	58	35	mg/kg	05.10.19 14:30	XF

Surrogate

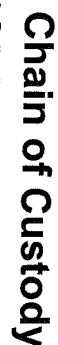
	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		102		70-130	%	05.10.19 14:30
4-Bromofluorobenzene	87		85		70-130	%	05.10.19 14:30

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

$[D] = 100 * (C-A) / B$
 $RPD = 200 * |(C-E) / (C+E)|$
 $[D] = 100 * (C) / [B]$
 $\text{Log Diff.} = \text{Log}(\text{Sample Duplicate}) - \text{Log}(\text{Original Sample})$

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

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



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Hobbs, NM (575-392-7550)

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Work Order No:

023937

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:

ANALYSIS REQUEST										Work Order Notes
060 020	0d	1B	300.0							

[illegible]

Sample Identification						Matrix	Date Sampled	Time Sampled	Depth	Number	TPH	BTEX	Chloro	Sample Comments	
PHD4					S	5/4/19	0950	0.5'	2						
PHD4A					S		1005	2.0'	2						
PHD5					S		1040	1.0'	2						
PHD5A					S		1045	2.0'	2						
PHD6					S		1240	0.5'	2						
PHD6A					S		1300	2.0'	2						
 05/19/19															

Total 200.7 / 6010 200.8 / 6020:
Circle Method(s) and Metal(s) to be

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 Ti Sn U V Zn
TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U 1631 / 245.1 / 7470 / 7471 : Hg

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 Anne Byers		5/19/14 @ 15:30z			5/19/14 11:00
3			4		
5			6		



Client: LT Environmental, Inc.

Date/ Time Received: 05/10/2019 11:00:00 AM

Work Order #: 623937

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)?	3.3
#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)?	No
#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: 05/10/2019

Checklist reviewed by:

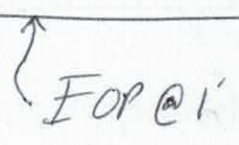
Jessica Kramer

Date: 05/10/2019

ATTACHMENT 3: SOIL SAMPLE LOGS



 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation		Identifier: PH01	Date: 4/23/19					
		Project Name: NASH DRAW #8 FED SWD	RP Number: 2RP-5007					
LITHOLOGIC / SOIL SAMPLING LOG		Logged By: BEN BELILL	Method: TRACK HOE					
Lat/Long: 32.230796, -103.910544		Field Screening: CHLORIDES, TPH, BTEX, GRO, DRO, and MRO.	Hole Diameter: N/A					
Total Depth: 1'								
Comment: All Chloride test include a 60% error factor.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
M	371	0.5	N	PH01	0	0.5'	CALICHE	CLAYEY, light brown/tan, poorly consolidated, no odor, fill.
M	<112	0.6	N	PH01A	1	1'		SAT (Same As Above)
					2			 FOP@1'
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation		Identifier: PH02	Date: 4/23/19					
		Project Name: NASH DRAW #8 FED SWD	RP Number: 2RP-5007					
LITHOLOGIC / SOIL SAMPLING LOG		Logged By: BEN BELILL	Method: TRACK HOE					
Lat/Long: 32.231402,-103.910562		Field Screening: CHLORIDES, TPH, BTEX, GRO, DRO, and MRO.	Hole Diameter: N/A					
Total Depth: 1'								
Comment All Chloride test include a 60% error factor.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
M	313	0.4	N	PH02	0	0.5'	CALICHE	CALICHE, moist, light brown/tan, poorly consolidated, no odor, fill.
M	<112	1.4	N	PH02A	1	1'	↓	SAT
					2			
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			



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

Compliance · Engineering · Remediation

Identifier: PH03

Date: 4/23/19

Project Name:
NASH DRAW #8 FED SWD

RP Number: 2RP-5007

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: BEN BELILL

Method: TRACK HOE

Lat/Long:
32.231127,-103.910581

Field Screening: CHLORIDES, TPH, BTEX,
GRO, DRO, and MRO.

Hole Diameter:
N/A

Total Depth:
1'

Comment All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
M	620	0.4	N	PH03	0	0.5'	CLAY	PALICHE, moist, light brown / tan, poorly consolidated, no odor, pill.
M	428	0.6	N	PH03A	1	1'	SAA	
					2			↑ EOP @ 1'
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			



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

Compliance · Engineering · Remediation

Identifier: PH04

Date: 4/23/19

Project Name:
NASH DRAW #8 FED SWD

RP Number: 2RP-5007

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: BEN BELILL

Method: TRACK HOE

Lat/Long:
32.231011,-103.910513

Field Screening: CHLORIDES, TPH, BTEX,
GRO, DRO, and MRO.

Hole Diameter:
N/A

Total Depth:
2'

Comment All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
M	1304	1.1	N	PH04J	0	0.5'	CALICHE	CALICHE, moist, light brown/tan, poorly consolidated, no odor, fill.
m	2899	1.5	N	PH04A	1	1'	↓	
							(SP)	SAND, dry, light brown/red, poorly graded, f.-m., trace brown silt, no odor.
D	587	1.1	N	PH04B	2	2'		
					3			↑ FOP@2'
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation		Identifier: PH05	Date: 4/24/19					
		Project Name: NASH DRAW #8 FED SWD	RP Number: 2RP-5007					
LITHOLOGIC / SOIL SAMPLING LOG		Logged By: BEN BELILL	Method: TRACK HOE					
Lat/Long: 32.231370,-103.910349		Field Screening: CHLORIDES, TPH, BTEX, GRO, DRO, and MRO.	Hole Diameter: N/A					
			Total Depth: 2'					
Comment All Chloride test include a 60% error factor.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
M	1382	1.1	N	PH05	0	0.5	CALICHE	CALICHE, moist, light brown/tan, poorly consolidated, no odor, fill.
M	852	0.4	N	PH05A	1	1'	↓	
M	<112	0.8	N	PH05B	2	2'	(SP)	SAND, moist, brown/red, poorly graded, f.-m., trace brown clay, no odor
					3			 EOP@2'
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			



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

Compliance · Engineering · Remediation

Identifier: PH06

Date: 4/24/19

Project Name:
NASH DRAW #8 FED SWD

RP Number: 2RP-5007

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: BEN BELILL

Method: TRACK HOE

Lat/Long:
32.231261, -103.910322

Field Screening: CHLORIDES, TPH, BTEX,
GRO, DRO, and MRO.

Hole Diameter:
N/A

Total Depth:
1'

Comment All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
M	1382	1.0	N	PH06	0	0.5'	CALICHE	CALICHE, moist, light brown/tan, poorly consolidated, no odor, fill.
M	5112	0.8	N	PH06A	1	1'	(SP)	SAND, moist, red/brown, poorly graded, f.-m., trace brown silt, no odor.
					2			EOP@1'
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

ATTACHMENT 4: PHOTOGRAPHIC LOG





Southwestern view from southern edge of excavated area during excavation activities.

Project: 012918153	XTO Energy, Inc. Nash Draw 8 Federal SWD Battery #1	 Advancing Opportunity
April 19, 2019	Photographic Log	



Northeastern view from northern edge of excavated area during excavation activities.

Project: 012918153	XTO Energy, Inc. Nash Draw 8 Federal SWD Battery #1	 Advancing Opportunity
April 25, 2019	Photographic Log	

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 198985

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 198985
	Action Type: [IM-SD] Incident File Support Doc (ENV) (IM-BNF)

CONDITIONS

Created By	Condition	Condition Date
amaxwell	None	3/20/2023