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

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

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

nAB1528051927 2L0737

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: BOPCO, L.P.	Contact: Bradley Blevins
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 575-887-7329
Facility Name: Big Sinks 2-24-30 State 3H	Facility Type: Exploration and Production

Surface Owner: State	Mineral Owner:	API No. 3001542457

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
E	2	24S	30E	2500		370		Eddy

Latitude: 32.247243 **Longitude:** 103.859049

NATURE OF RELEASE

Type of Release: Produced Water	Volume of Release: 838 barrels	Volume Recovered: 670 barrels
Source of Release: 4 inch poly line going to jet pump failed	Date and Hour of Occurrence: 10-6-15 @ 9:00am	Date and Hour of Discovery 10-6-15 @ 9:33am
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher and Heather via email	
By Whom? Bradley Blevins	Date and Hour 10-6-15 @1:29pm via email	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

NM OIL CONSERVATION
ARTESIA DISTRICT
OCT 07 2015
RECEIVED

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
A four inch poly line coming from the charge pump at the battery ruptured due to the line pressuring up. Produced water was released to the well pad; no fluid escaped the well pad. Vacuum trucks were called to the location and recovered 670 barrels of produced water. A contract gang made repairs to the line.

Describe Area Affected and Cleanup Action Taken.*
Vacuum trucks were called to the location and recovered 670 barrels of produced water. A contract gang made repairs to the line.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

Signature: Bradley Blevins

Printed Name: Bradley Blevins

Title: Assistant Remediation Foreman

E-mail Address: bblevins@basspet.com

Date: 10-7-15 Phone: 432-214-3704

OIL CONSERVATION DIVISION

Approved by Environmental Specialist:

Approval Date: 10/7/15 Expiration Date: N/A

Conditions of Approval: Attached ☐

Remediation per O.C.D. Rules & Guidelines
~~SUBMIT REMEDIATION PROPOSAL NO~~
LATER THAN: 11/8/15

2RP-3319

* Attach Additional Sheets If Necessary

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

State of New Mexico
Energy Minerals and Natural Resources Department

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

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

Incident ID	
District RP	2RP-3319
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: XTO Energy, Inc	OGRID: 5380
Contact Name: Kyle Littrell	Contact Telephone: (432)-221-7331
Contact email: Kyle_Littrell@xtoenergy.com	Incident #: 2RP-3319
Contact mailing address: 522 W. Mermod, Suite 704 Carlsbad, NM 88220	

Location of Release Source

Latitude N 32.247243 Longitude W -103.859049
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Big Sinks 2-24-30 State 3H	Site Type: Exploration and Production
Date Release Discovered: 10/6/2015	API# *(if applicable):* 30-015-42457

Unit Letter	Section	Township	Range	County
E	2	24S	30E	Eddy

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls):	Volume Recovered (bbls):
☒ Produced Water	Volume Released (bbls): 838	Volume Recovered (bbls): 670
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release
A 4-inch poly line coming from the charge pump at the battery ruptured due to the line pressuring up. Produced water was released to the well pad; no fluid escaped the well pad. Vacuum trucks were called to the location and recovered 670 barrels of produced water. A contract crew made repairs to the line. Vacuum trucks were called to the location and recovered 670 barrels of produced water.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-3319
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? Released volume was greater than 25 bbls.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? XTO reported the release to the New Mexico Oil Conservation Division to Mike Bratcher and Heather via email at 1:29 pm. XTO also reported on a Release Notification and Corrective Action Form C-141 on October 7, 2015.	

Initial Response

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

☒ The source of the release has been stopped.

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

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

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

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

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

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: Date: 10/4/2019

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

OCD Only

Received by: Date:

Incident ID	
District RP	2RP-3319
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?	>100 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

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

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-3319
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: Kyle Littrell Title: SH&E Supervisor

Signature: Date: 10/4/2019

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

OCD Only

Received by: Date:

Incident ID	
District RP	2RP-3319
Facility ID	
Application ID	

Closure

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

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

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

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

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

☒ Description of remediation activities

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: Date: 10/4/2019

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

OCD Only

Received by: Date: _____

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

LT Environmental, Inc.
3300 North "A" Street
Building 1, Unit 103
Midland, Texas 79705
432.704.5178

October 8, 2019

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

RE: Closure Request
Big Sinks 2-24-30 State 3H
Remediation Permit Number 2RP-3319
Eddy County, New Mexico

Dear Mr. Billings:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following Closure Request report detailing site assessment and soil sampling activities at the Big Sinks 2-24-30 State 3H (Site) located in Unit E, Section 2, Township 24 South, Range 30 East, in Eddy County, New Mexico (Figure 1). The purpose of the site assessment and soil sampling activities was to assess for the presence or absence of impacted soil resulting from a historical produced water release at the Site.

The release is included in the Compliance Agreement for Remediation for Historical Releases (Compliance Agreement) between XTO and the New Mexico Oil Conservation Division (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 the release occurred prior to August 14, 2018, the effective date of 19.15.29 NMAC; however, remediation was ongoing. Based on the results of the soil sampling activities, XTO is submitting this Closure Request, describing the site assessment and soil sampling activities that occurred and requesting no further action for this release event.

RELEASE BACKGROUND

On October 6, 2015, a four-inch poly line from the charge pump at the battery ruptured due to the line pressuring up. Approximately 838 barrels (bbls) of produced water were release onto the surface of the well pad; no released fluid escaped the well pad. Vacuum trucks were dispatched to the Site to recover free-standing fluids; approximately 670 bbls of produced water were recovered. The former operator reported the release to the NMOCD on a Release Notification and Corrective Action Form C-141 on October 7, 2015, and was assigned Remediation Permit (RP) Number 2RP-3319 (Attachment 1). Although the release occurred while the facility was operated

by the previous operator, XTO is the current operator and is committed to addressing any releases that remain unresolved.

SITE CHARACTERIZATION

LTE characterized the Site according to Table 1, *Closure Criteria for Soils Impacted by a Release*, of 19.15.29.12 of the 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 United States Geological Survey (USGS) well 321526103520101 23S.30E.34.32400, located approximately 4,347 feet northwest of the Site. The water well has a depth to groundwater of 441 feet bgs and a total depth of 567 feet bgs. Ground surface elevation at the water well location is approximately 3,450 feet above mean sea level (AMSL), which is approximately seven feet lower in elevation than the Site. The closest continuously flowing water or significant watercourse to the Site is an unnamed dry wash located approximately 6,100 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 medium potential karst area.

CLOSURE CRITERIA

Based on the results of the Site Characterization, the following NMOCD Table 1 Closure Criteria (Closure Criteria) apply:

- Benzene: 10 milligrams per kilogram (mg/kg);
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg;
- TPH-gasoline range organics (GRO) and TPH-diesel range organics (DRO): 1,000 mg/kg;
- Total petroleum hydrocarbons (TPH): 2,500 mg/kg; and
- Chloride: 20,000 mg/kg.

SITE ASSESSMENT ACTIVITIES

During June 2019, LTE personnel inspected the Site to evaluate the release extent. Due to the absence of visible indications of the historical release area, potholes were advanced via backhoe at twelve locations around the well pad to assess for potential soil impacts. Potholes PH01 through PH12 were advanced to a depth of 4 feet bgs. Two delineation soil samples were collected from each pothole from depths ranging from 1 foot to 4 feet bgs. Soil from the potholes was field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photoionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. Field

screening results and observations for each pothole were logged on lithologic/soil sampling logs, which are included in Attachment 2. The pothole delineation soil sample locations were mapped utilizing a handheld Global Positing System (GPS) unit and are depicted on Figure 2.

The delineation soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were shipped at or below 4 degrees Celsius (°C) under strict chain-of-custody (COC) procedures to Xenco Laboratories (Xenco) in Midland, Texas, for analysis of BTEX following United States Environmental Protection Agency (USEPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following USEPA Method 8015M/D; and chloride following USEPA Method 300.0.

Based on visual observations, field screening, and laboratory analytical results for the delineation soil samples, excavation of soil was not warranted. Photographic documentation was conducted during the Site visit. Photographs are included in Attachment 3.

ANALYTICAL RESULTS

Laboratory analytical results indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria in all delineation soil samples collected from potholes PH01 through PH12. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Attachment 4.

CLOSURE REQUEST

Potholes were advanced at twelve locations around the well pad to assess for potential soil impacts as a result of the October 6, 2015, produced water release. Laboratory analytical results for the delineation soil samples collected from potholes PH01 through PH12 indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria and no further remediation was required. Based on visual observations, field screening, and laboratory analytical results, no impacted soil was identified as a result of the historical release.

Initial response efforts and natural attenuation have mitigated impacts at the Site. XTO requests no further action for RP Number 2RP-3319. An updated NMOCD Form C-141 is included as Attachment 1.

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

Sincerely,

LT ENVIRONMENTAL, INC.

Bryan Paraspolo
Project Environmental Scientist

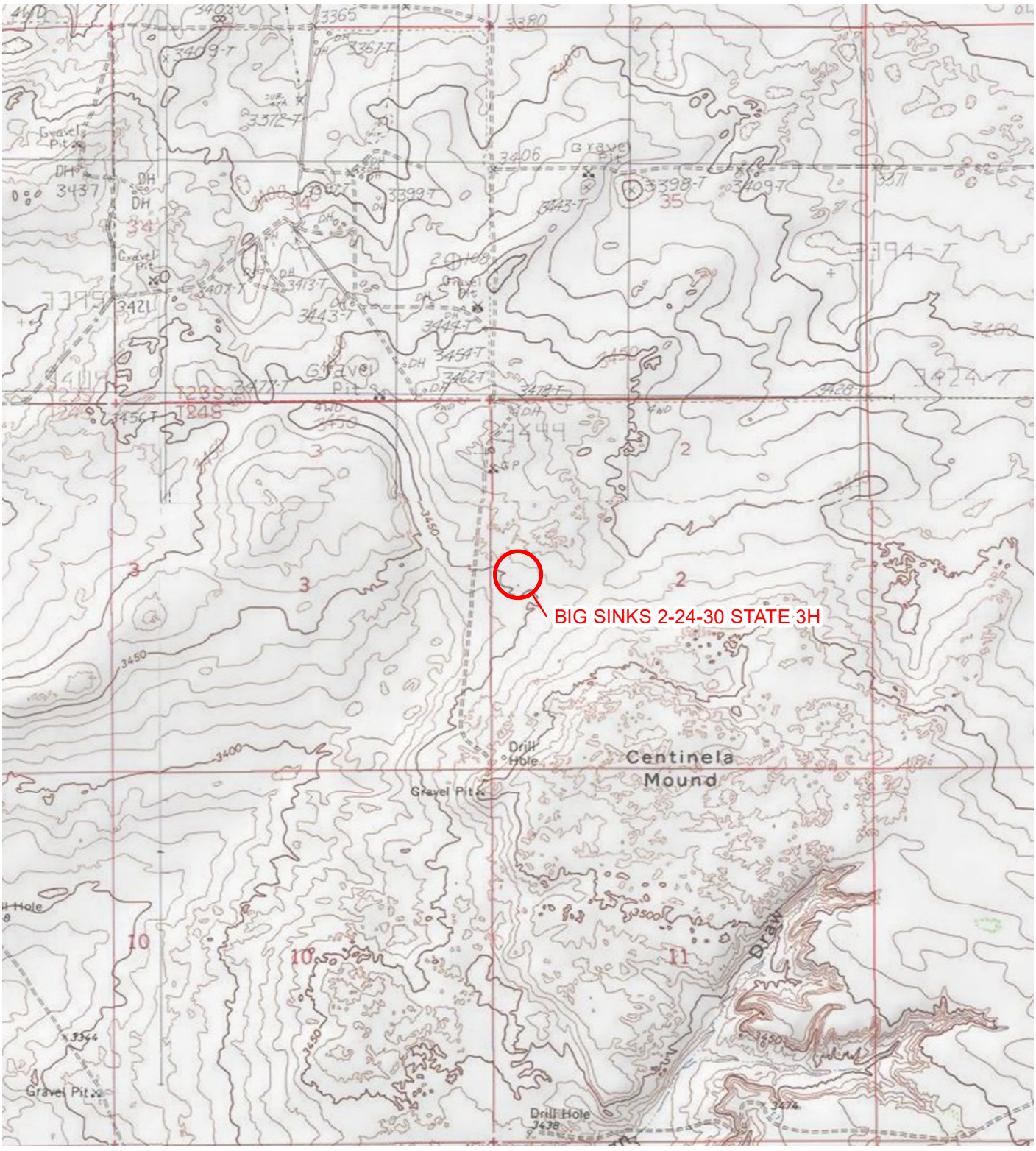
Ashley L. Ager, P.G.
Senior Geologist

cc: Kyle Littrell, XTO
Mike Bratcher, NMOCD
Ryan Mann, State Land Office

Attachments:

Figure 1	Site Location Map
Figure 2	Delineation Soil Sample Locations
Table 1	Soil Analytical Results
Attachment 1	Initial/Final NMOCD Form C-141 (2RP-3319)
Attachment 2	Lithologic/Soil Sample Logs
Attachment 3	Photographic Log
Attachment 4	Laboratory Analytical Reports

FIGURES



LEGEND

SITE LOCATION

IMAGE COURTESY OF ESRI/USGS

0 2,000 4,000

Feet

N

NEW MEXICO

NOTE: REMEDIATION PERMIT NUMBER 2RP-3319

FIGURE 1
SITE LOCATION MAP
BIG SINKS 2-24-30 STATE 3H
UNIT E SEC 2 T24S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012918110_BIG SINKS 2-24-30 STATE 3H\012918110_FIG01_SL_3319.mxd

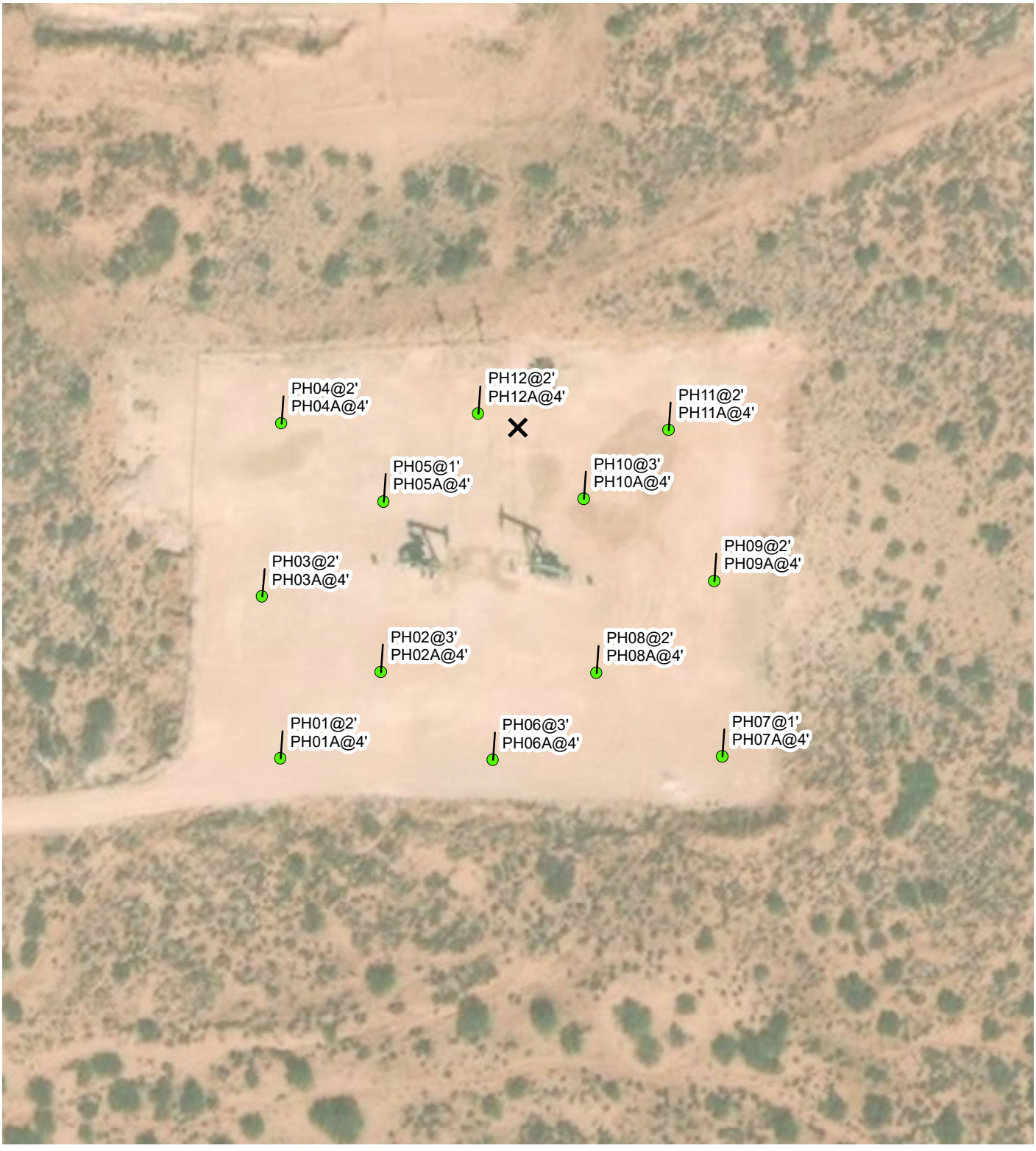


IMAGE COURTESY OF ESRI

LEGEND

- RELEASE LOCATION
- DELINEATION SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA

0 100 200
Feet

N

FIGURE 2
DELINEATION SOIL SAMPLE LOCATIONS
BIG SINKS 2-24-30 STATE 3H
UNIT E SEC 2 T24S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)
NOTE: REMEDIATION PERMIT NUMBER 2RP-3319

P:\XTO Energy\GIS\MXD\012918110_BIG SINKS 2-24-30 STATE 3H\012918110_FIG02_DELINEATION_3319.mxd

TABLES

TABLE 1
SOIL ANALYTICAL RESULTS

BIG SINKS 2-24-30 STATE 3H
REMEDIATION PERMIT NUMBER 2RP-3319
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)
PH01	2	06/12/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	42.0
PH01A	4	06/12/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<14.9	<14.9	<14.9	<14.9	<14.9	40.8
PH02	3	06/12/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<14.9	<14.9	<14.9	<14.9	<14.9	19.8
PH02A	4	06/12/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<5.03
PH03	2	06/12/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<5.04
PH03A	4	06/12/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<5.03
PH04	2	06/12/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	40.4
PH04A	4	06/12/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	16.7
PH05	1	06/12/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	10.8
PH05A	4	06/12/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	276
PH06	3	06/12/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	6.87
PH06A	4	06/12/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	21.7
PH07	1	06/12/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	42.8
PH07A	4	06/12/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	31.1
PH08	2	06/13/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	35.4
PH08A	4	06/13/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<5.04
PH09	2	06/13/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	49.3
PH09A	4	06/13/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	686
PH10	3	06/13/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	<4.98
PH10A	4	06/13/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	19.8
PH11	2	06/13/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	130
PH11A	4	06/13/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	<5.00
PH12	2	06/13/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	49.7
PH12A	4	06/13/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<14.9	<14.9	<14.9	<14.9	<14.9	<5.01
NMOCD Table 1 Closure Criteria			**10**	NE	NE	NE	**50**	NE	NE	NE	**1,000**	**2,500**	**20,000**

Notes:

below ground surface
ene, ethylbenzene, and total xylenes
diesel range organics
gasoline range organics
milligrams per kilogram
MRO - 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-3319)

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

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

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

nAB1528051927 2L0737

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: BOPCO, L.P.	Contact: Bradley Blevins
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 575-887-7329
Facility Name: Big Sinks 2-24-30 State 3H	Facility Type: Exploration and Production

Surface Owner: State	Mineral Owner:	API No. 3001542457

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
E	2	24S	30E	2500		370		Eddy

Latitude: 32.247243 **Longitude:** 103.859049

NATURE OF RELEASE

Type of Release: Produced Water	Volume of Release: 838 barrels	Volume Recovered: 670 barrels
Source of Release: 4 inch poly line going to jet pump failed	Date and Hour of Occurrence: 10-6-15 @ 9:00am	Date and Hour of Discovery 10-6-15 @ 9:33am
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher and Heather via email	
By Whom? Bradley Blevins	Date and Hour 10-6-15 @1:29pm via email	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

NM OIL CONSERVATION
ARTESIA DISTRICT
OCT 07 2015
RECEIVED

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
A four inch poly line coming from the charge pump at the battery ruptured due to the line pressuring up. Produced water was released to the well pad; no fluid escaped the well pad. Vacuum trucks were called to the location and recovered 670 barrels of produced water. A contract gang made repairs to the line.

Describe Area Affected and Cleanup Action Taken.*
Vacuum trucks were called to the location and recovered 670 barrels of produced water. A contract gang made repairs to the line.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

Signature: Bradley Blevins

Printed Name: Bradley Blevins

Title: Assistant Remediation Foreman

E-mail Address: bblevins@basspet.com

Date: 10-7-15 Phone: 432-214-3704

OIL CONSERVATION DIVISION

Approved by Environmental Specialist:

Approval Date: 10/7/15 Expiration Date: N/A

Conditions of Approval: Attached ☐

Remediation per O.C.D. Rules & Guidelines
~~SUBMIT REMEDIATION PROPOSAL NO~~
LATER THAN: 11/8/15

2RP-3319

* Attach Additional Sheets If Necessary

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	2RP-3319
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: XTO Energy, Inc	OGRID: 5380
Contact Name: Kyle Littrell	Contact Telephone: (432)-221-7331
Contact email: Kyle_Littrell@xtoenergy.com	Incident #: 2RP-3319
Contact mailing address: 522 W. Mermod, Suite 704 Carlsbad, NM 88220	

Location of Release Source

Latitude N 32.247243 Longitude W -103.859049
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Big Sinks 2-24-30 State 3H	Site Type: Exploration and Production
Date Release Discovered: 10/6/2015	API# *(if applicable):* 30-015-42457

Unit Letter	Section	Township	Range	County
E	2	24S	30E	Eddy

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls):	Volume Recovered (bbls):
☒ Produced Water	Volume Released (bbls): 838	Volume Recovered (bbls): 670
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release
A 4-inch poly line coming from the charge pump at the battery ruptured due to the line pressuring up. Produced water was released to the well pad; no fluid escaped the well pad. Vacuum trucks were called to the location and recovered 670 barrels of produced water. A contract crew made repairs to the line. Vacuum trucks were called to the location and recovered 670 barrels of produced water.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-3319
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? Released volume was greater than 25 bbls.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? XTO reported the release to the New Mexico Oil Conservation Division to Mike Bratcher and Heather via email at 1:29 pm. XTO also reported on a Release Notification and Corrective Action Form C-141 on October 7, 2015.	

Initial Response

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

☒ The source of the release has been stopped.

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

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

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

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

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

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: Date: 10/4/2019

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

OCD Only

Received by: Date:

Incident ID	
District RP	2RP-3319
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?	>100 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-3319
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: Kyle Littrell Title: SH&E Supervisor

Signature: Date: 10/4/2019

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

OCD Only

Received by: Date:

Form C-141
Page 6

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-3319
Facility ID	
Application ID	

Closure

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

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

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

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

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

☒ Description of remediation activities

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: Date: 10/4/2019

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

OCD Only

Received by: Date:

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

Closure Approved by: Brittany Hall Date: 2/28/2023

Printed Name: Brittany Hall Title: Environmental Specialist

ATTACHMENT 2: LITHOLOGIC / SOIL SAMPLE LOGS

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
Compliance · Engineering · Remediation

Identifier: PH01	Date: 06/12/19
Project Name: PLU B.g Sinks 2-24-50	RP Number:
LITHOLOGIC / SOIL SAMPLING LOG Logged By: Robert M	Method: Pothole
Lat/Long:	Field Screening: Hole Diameter: 2ft Total Depth: 4'
Comments:	

	Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
1230	D	<124	0.1	N		0–1	1'	S	SP-SM Brown
1231	D	<124	1.8	N		1–2	2'	S	SP-SM trace Clay Brown
1233	D	<124	1.1	N		2–3	3'	S	SP-SM Brown
1235	D	<124	0.6	N		3–4	4'	S	SP-SM trace roots Brown

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12

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
Compliance · Engineering · Remediation

Identifier: PH02	Date: 06/12/19
Project Name: PLU Big Sinks 2-24-30	RP Number:
Logged By: Robert M.	Method: Pot hole
Hole Diameter: 2ft	Total Depth: 4'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long: Field Screening:

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D	364	2.7	N	1256	0–1	1'	S	SP-SM Brown
D	<124	2.5	N	1252	1–2	2'	S	SP-SM trace root Brown
D	<124	3.6	N	1254	2–3	3'	S	SP-SM Brown
D	<124	1.6	N	1255	3–4	4'	S	SP-SM Brown

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
Compliance · Engineering · Remediation

Identifier: PH03	Date: 06/12/19
Project Name: PLU BIG SINKS 2-24-30	RP Number:
Logged By: Robert M.	Method: Pot hole
Hole Diameter: 2'	Total Depth: 4'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening:

Comments:

	Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
1315	D	<124	3.4	N		0–1	1'	S	SP-SM Brown trace Clay
1320	D	<124	4.2	N		2	2'	S	SP-SM Brown trace Clay
1322	D	<124	3.2	N		3	3'	S	SP-SM Brown trace Clay
1325	D	<124	2.5	N		4	4'	S	SP-SM Brown trace Clay

5 6 7 8 9 10 11 12

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
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Identifier: PH04	Date: 06/12/19
Project Name: PLU Big Sinks 2-24-30	RP Number:
Logged By: Robert M.	Method: Pothole
Hole Diameter: 2'	Total Depth: 4'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening:

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
1350 D	200	0.8	N		0–1	1'	S	SP-SM trace Clay Brown
1357 D	<124	1.8	N		1–2	2'	S	SP-SM trace Clay Brown
1359 D	<124	1.4	N		2–3	3'	S	SP-SM trace Clay Brown
1400 D	<124	1.2	N		3–4	4'	S	SP-SM trace Clay Brown

4 5 6 7 8 9 10 11 12

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
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Identifier: PH05	Date: 06/12/19
Project Name: PLU Big Sink 2-24-30	RP Number:
Logged By: Robert M.	Method: Pot hole
Hole Diameter: 2'	Total Depth: 4'
Lat/Long:	Field Screening:

LITHOLOGIC / SOIL SAMPLING LOG

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
1428 D	592	1.6	N		0–1	1'	S	SP-SM Brown
1430 D	592	1.4	N		2	2'	S	SP-SM trace Clay Brown
1432 D	312	1.1	N		3	3'	S	SP-SM trace Clay trace root Brown
1435 D	312	3.3	N		4	4'	S	SP-SM Brown
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
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Identifier: PH06	Date: 06/12/19
Project Name: PLU Big Sinks 2-24-30	RP Number:
Logged By: Robert M	Method: pot hole
Hole Diameter: 2'	Total Depth: 4'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening:

Comments:

	Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
1448	D	<124	1.3	N		0–1	1'	S	SP-SM Brown
1450	D	<124	3.0	N		1–2	2'	S	SP-SM Brown
1453	D	<124	3.2	N		2–3	3'	S	SP-SM Brown trace root
1455	D	<124	2.5	N		3–4	4'	S	SP-SM Brown

4 5 6 7 8 9 10 11 12

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
Compliance · Engineering · Remediation

Identifier: PH07	Date: 06/12/19
Project Name: PLU Big Sinks 2-24-30	RP Number:
Logged By: Robert M.	Method: Pot hole
Hole Diameter: 2'	Total Depth: 4'
Lat/Long:	Field Screening:

LITHOLOGIC / SOIL SAMPLING LOG

Comments:

	Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
1520	D	<124	1.4	N		0–1	1'	S	SP-SM Brown
1522	D	<124	0.6	N		1–2	2'	S	SP-SM Brown
1524	D	<124	0.2	N		2–3	3'	S	SP-SM Brown
1526	D	<124	4.6	N		3–4	4'	S	SP-SM Brown

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
Compliance · Engineering · Remediation

Identifier: PH08	Date: 06/13/19
Project Name: Big Sinks 2-24-30	RP Number:
Logged By: Robert M	Method: Pot hole
Lat/Long:	Field Screening:
Hole Diameter: 2'	Total Depth: 4'

LITHOLOGIC / SOIL SAMPLING LOG

Comments:

	Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
0830	D	200	1.0	N		0–1	1'	S	SP-SM Brown
0835	D	<124	2.9	N		1–2	2'	S	SP-SM Brown
0840	D	<124	1.6	N		2–3	3'	S	SP-SC Reddish Brown
0845	D	<124	0.1	N		3–4	4'	S	SP-SC trace root Reddish Brown
						4–5			
						5–6			
						6–7			
						7–8			
						8–9			
						9–10			
						10–11			
						11–12			

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
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Identifier: PH09	Date: 06/13/19
Project Name: PLU Big Sn/SS 2-24-30	RP Number:
Logged By: Robert M.	Method: Pothole
Hole Diameter: 2'	Total Depth: 4'
Lat/Long:	Field Screening:

LITHOLOGIC / SOIL SAMPLING LOG

Comments:

	Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
0850	D	200	0.1	N		0–1	1'	S	SP-SM Brown trace Clay
0855	D	1004	2.4	N		1–2	2'	S	SP-SM Brown trace Clay
0900	D	930	0.6	N		2–3	3'	S	SP-SM Brown trace Clay
0905	D	655	1.3	N		3–4	4'	S	Sand / Caliche Brown / Tan

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
Compliance · Engineering · Remediation

Identifier: PH10	Date: 06/13/19
Project Name: PLU Big Sinks 2-24-30	RP Number:
Logged By: Robert M	Method: Pothole
Hole Diameter: 2'	Total Depth: 4'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening:

Comments:

	Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
0910	D	<124	1.1	N		0–1	1'	S	SP-SC Brown
0915	D	<124	0.1	N		1–2	2'	S	SP-SC Brown trace root
0920	D	<124	2.6	N		2–3	3'	S	SP-SC Brown
0925	D	<124	0.6	N		3–4	4'	S	SP-SM Brown

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Advancing Opportunity
25 Years

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

Compliance · Engineering · Remediation

		Identifier: PH 11	Date: 06/13/19
		Project Name: PLU Big Sinks 2-24-30	RP Number:
LITHOLOGIC / SOIL SAMPLING LOG		Logged By: Robert M.	Method: Pot hole
Lat/Long:	Field Screening:	Hole Diameter: 2'	Total Depth: 4'
Comments:			

	Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
0930	dry	593	2.6	N		0–1	1'	S	SP-SM trace caliche light Brown
0935	D	364	3.0	N		2	2'	S	SP-SM light Brown
0940	D	1124	1.6	N		3	3'	S	SP-SM light Brown
0945	D	1124	1.5	N		4	4'	S	SP-SM light Brown

5 6 7 8 9 10 11 12

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
Compliance · Engineering · Remediation

Identifier: PH012	Date: 06/13/19
Project Name: BigBinks PLU 2-2430	RP Number:
Logged By: Robert M	Method: Pothole
Hole Diameter: 2'	Total Depth: 4'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening:

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
1200 D	380	1.6	N		0–1	1'	S	SP-SM Brown
1205 D	<124	2.4	N		2	2'	S	SP-SC Brown
1210 D	<124	1.8	N		3	3'	S	SP-SC Brown
1215 D	<124	2.0	N		4	4'	S	SP-SM trace root Brown
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

ATTACHMENT 3: PHOTOGRAPHIC LOG

North facing view of the well pad and assessment area.

Project: 012918110	XTO Energy, Inc. Big Sinks 2-24-30 State 3H	LTE Advancing Opportunity
October 7, 2019	Photographic Log	

West facing view of the well pad and assessment area.

Project: 012918110	XTO Energy, Inc. Big Sinks 2-24-30 State 3H	LTE Advancing Opportunity
October 7, 2019	Photographic Log	

ATTACHMENT 4: LABORATORY ANALYTICAL REPORTS

Analytical Report 628028

for

LT Environmental, Inc.

Project Manager: Ashley Ager

PLU Big Sinks 2-24-30

27-JUN-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)

27-JUN-19

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

Reference: XENCO Report No(s): **628028**
PLU Big Sinks 2-24-30
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) 628028. 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. 628028 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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

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

Sample Cross Reference 628028

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 2-24-30

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH01	S	06-12-19 12:31	2 ft	628028-001
PH01A	S	06-12-19 12:35	4 ft	628028-002
PH02	S	06-12-19 12:54	3 ft	628028-003
PH02A	S	06-12-19 12:55	4 ft	628028-004
PH03	S	06-12-19 13:20	2 ft	628028-005
PH03A	S	06-12-19 13:25	4 ft	628028-006
PH04	S	06-12-19 13:57	2 ft	628028-007
PH04A	S	06-12-19 14:00	4 ft	628028-008
PH05	S	06-12-19 14:28	4 ft	628028-009
PH05A	S	06-12-19 14:35	4 ft	628028-010
PH06	S	06-12-19 14:53	3 ft	628028-011
PH06A	S	06-12-19 14:55	4 ft	628028-012
PH07	S	06-12-19 15:20	1 ft	628028-013
PH07A	S	06-12-19 15:26	4 ft	628028-014
PH08	S	06-13-19 08:35	2 ft	628028-015
PH08A	S	06-13-19 08:45	4 ft	628028-016
PH09	S	06-13-19 08:55	2 ft	628028-017
PH09A	S	06-13-19 09:05	4 ft	628028-018
PH10	S	06-13-19 09:20	3 ft	628028-019
PH10A	S	06-13-19 09:25	4 ft	628028-020
PH11	S	06-13-19 09:35	2 ft	628028-021
PH11A	S	06-13-19 09:45	4 ft	628028-022
PH12	S	06-13-19 12:05	2 ft	628028-023
PH12A	S	06-13-19 12:15	4 ft	628028-024

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU Big Sinks 2-24-30

Project ID:
Work Order Number(s): *628028*

Report Date: *27-JUN-19*
Date Received: *06/19/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3093109 TPH by SW8015 Mod
Surrogate o-Terphenyl recovered below QC limits. Matrix interferences is suspected.
Samples affected are: 628028-007,628028-015,628028-013,628028-012.

Batch: LBA-3093581 BTEX-MTBE by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3093723 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 628028

LT Environmental, Inc., Arvada, CO

Project Name: PLU Big Sinks 2-24-30

Project Id:
Contact: Ashley Ager
Project Location: Delaware Basin

Date Received in Lab: Wed Jun-19-19 11:40 am
Report Date: 27-JUN-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	628028-001		628028-002		628028-003		628028-004		628028-005		628028-006	
	Field Id:	PH01		PH01A		PH02		PH02A		PH03		PH03A	
	Depth:	2- ft		4- ft		3- ft		4- ft		2- ft		4- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jun-12-19 12:31		Jun-12-19 12:35		Jun-12-19 12:54		Jun-12-19 12:55		Jun-12-19 13:20		Jun-12-19 13:25	
BTEX by EPA 8021B	***Extracted:***	Jun-25-19 16:00		Jun-25-19 16:00		Jun-25-19 16:00		Jun-25-19 16:00		Jun-25-19 16:00		Jun-25-19 16:00	
	Analyzed:	Jun-26-19 09:39		Jun-26-19 10:01		Jun-26-19 10:24		Jun-26-19 11:08		Jun-26-19 11:30		Jun-26-19 11:52	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00201	0.00201	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200
Toluene		<0.00200	0.00200	<0.00201	0.00201	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200
Ethylbenzene		<0.00200	0.00200	<0.00201	0.00201	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200
m,p-Xylenes		<0.00399	0.00399	<0.00402	0.00402	<0.00402	0.00402	<0.00401	0.00401	<0.00400	0.00400	<0.00399	0.00399
o-Xylene		<0.00200	0.00200	<0.00201	0.00201	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200
Total Xylenes		<0.00200	0.00200	<0.00201	0.00201	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200
Total BTEX		<0.00200	0.00200	<0.00201	0.00201	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200
Chloride by EPA 300	***Extracted:***	Jun-21-19 11:30		Jun-21-19 11:30		Jun-21-19 11:30		Jun-21-19 11:30		Jun-21-19 11:30		Jun-21-19 11:30	
	Analyzed:	Jun-21-19 16:45		Jun-21-19 16:40		Jun-21-19 17:00		Jun-21-19 17:04		Jun-21-19 17:19		Jun-21-19 17:24	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		42.0	5.01	40.8	5.01	19.8	5.05	<5.03	5.03	<5.04	5.04	<5.03	5.03
TPH by SW8015 Mod	***Extracted:***	Jun-20-19 08:00		Jun-20-19 08:00		Jun-20-19 08:00		Jun-20-19 08:00		Jun-20-19 08:00		Jun-20-19 08:00	
	Analyzed:	Jun-20-19 14:32		Jun-20-19 15:46		Jun-20-19 16:11		Jun-20-19 16:35		Jun-20-19 17:00		Jun-20-19 17:25	
	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	<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
Total GRO-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

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Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analysis Summary 628028

LT Environmental, Inc., Arvada, CO

Project Name: PLU Big Sinks 2-24-30

Project Id:
Contact: Ashley Ager
Project Location: Delaware Basin

Date Received in Lab: Wed Jun-19-19 11:40 am
Report Date: 27-JUN-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	628028-007		628028-008		628028-009		628028-010		628028-011		628028-012	
	Field Id:	PH04		PH04A		PH05		PH05A		PH06		PH06A	
	Depth:	2- ft		4- ft		4- ft		4- ft		3- ft		4- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jun-12-19 13:57		Jun-12-19 14:00		Jun-12-19 14:28		Jun-12-19 14:35		Jun-12-19 14:53		Jun-12-19 14:55	
BTEX by EPA 8021B	***Extracted:***	Jun-25-19 16:00		Jun-25-19 16:00		Jun-25-19 14:00		Jun-25-19 14:00		Jun-25-19 14:00		Jun-25-19 14:00	
	Analyzed:	Jun-26-19 12:14		Jun-26-19 12:36		Jun-26-19 16:50		Jun-26-19 17:14		Jun-26-19 17:37		Jun-26-19 18:00	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00199	0.00199	<0.00198	0.00198	<0.00201	0.00201	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200
Toluene		<0.00199	0.00199	<0.00198	0.00198	<0.00201	0.00201	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200
Ethylbenzene		<0.00199	0.00199	<0.00198	0.00198	<0.00201	0.00201	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200
m,p-Xylenes		<0.00398	0.00398	<0.00397	0.00397	<0.00402	0.00402	<0.00402	0.00402	<0.00399	0.00399	<0.00400	0.00400
o-Xylene		<0.00199	0.00199	<0.00198	0.00198	<0.00201	0.00201	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200
Total Xylenes		<0.00199	0.00199	<0.00198	0.00198	<0.00201	0.00201	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200
Total BTEX		<0.00199	0.00199	<0.00198	0.00198	<0.00201	0.00201	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200
Chloride by EPA 300	***Extracted:***	Jun-21-19 11:30		Jun-21-19 11:30		Jun-21-19 11:30		Jun-21-19 11:30		Jun-21-19 11:30		Jun-21-19 11:45	
	Analyzed:	Jun-21-19 17:29		Jun-21-19 17:33		Jun-21-19 17:38		Jun-21-19 17:50		Jun-21-19 17:55		Jun-21-19 13:10	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		40.4	5.03	16.7	5.01	10.8	4.99	276	5.03	6.87	5.03	21.7	5.03
TPH by SW8015 Mod	***Extracted:***	Jun-20-19 08:00		Jun-20-19 08:00		Jun-20-19 08:00		Jun-20-19 08:00		Jun-20-19 08:00		Jun-20-19 08:00	
	Analyzed:	Jun-20-19 17:50		Jun-20-19 18:15		Jun-20-19 18:39		Jun-20-19 19:04		Jun-20-19 19:54		Jun-20-19 20:19	
	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	<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
Total GRO-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

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

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analysis Summary 628028

LT Environmental, Inc., Arvada, CO

Project Name: PLU Big Sinks 2-24-30

Project Id:
Contact: Ashley Ager
Project Location: Delaware Basin

Date Received in Lab: Wed Jun-19-19 11:40 am
Report Date: 27-JUN-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	628028-013		628028-014		628028-015		628028-016		628028-017		628028-018	
	Field Id:	PH07		PH07A		PH08		PH08A		PH09		PH09A	
	Depth:	1- ft		4- ft		2- ft		4- ft		2- ft		4- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jun-12-19 15:20		Jun-12-19 15:26		Jun-13-19 08:35		Jun-13-19 08:45		Jun-13-19 08:55		Jun-13-19 09:05	
BTEX by EPA 8021B	***Extracted:***	Jun-25-19 14:00		Jun-25-19 14:00		Jun-25-19 14:00		Jun-25-19 14:00		Jun-25-19 14:00		Jun-25-19 14:00	
	Analyzed:	Jun-26-19 18:23		Jun-26-19 18:46		Jun-26-19 21:36		Jun-26-19 21:59		Jun-26-19 22:22		Jun-26-19 22:45	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00201	0.00201	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200
Toluene		<0.00200	0.00200	<0.00201	0.00201	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200
Ethylbenzene		<0.00200	0.00200	<0.00201	0.00201	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200
m,p-Xylenes		<0.00401	0.00401	<0.00402	0.00402	<0.00402	0.00402	<0.00401	0.00401	<0.00400	0.00400	<0.00399	0.00399
o-Xylene		<0.00200	0.00200	<0.00201	0.00201	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200
Total Xylenes		<0.00200	0.00200	<0.00201	0.00201	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200
Total BTEX		<0.00200	0.00200	<0.00201	0.00201	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200
Chloride by EPA 300	***Extracted:***	Jun-21-19 11:45		Jun-21-19 11:45		Jun-21-19 11:45		Jun-21-19 11:45		Jun-21-19 11:45		Jun-21-19 11:45	
	Analyzed:	Jun-21-19 13:27		Jun-21-19 13:32		Jun-21-19 13:38		Jun-21-19 13:43		Jun-21-19 14:00		Jun-21-19 14:05	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		42.8	4.96	31.1	4.98	35.4	4.98	<5.04	5.04	49.3	5.03	686	5.03
TPH by SW8015 Mod	***Extracted:***	Jun-20-19 08:00		Jun-20-19 08:00		Jun-20-19 08:00		Jun-20-19 08:00		Jun-20-19 08:00		Jun-20-19 08:00	
	Analyzed:	Jun-20-19 20:44		Jun-20-19 21:09		Jun-20-19 21:34		Jun-20-19 21:59		Jun-20-19 22:23		Jun-20-19 22:48	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<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
Total GRO-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

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

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analysis Summary 628028

LT Environmental, Inc., Arvada, CO

Project Name: PLU Big Sinks 2-24-30

Project Id:
Contact: Ashley Ager
Project Location: Delaware Basin

Date Received in Lab: Wed Jun-19-19 11:40 am
Report Date: 27-JUN-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	628028-019		628028-020		628028-021		628028-022		628028-023		628028-024	
	Field Id:	PH10		PH10A		PH11		PH11A		PH12		PH12A	
	Depth:	3- ft		4- ft		2- ft		4- ft		2- ft		4- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jun-13-19 09:20		Jun-13-19 09:25		Jun-13-19 09:35		Jun-13-19 09:45		Jun-13-19 12:05		Jun-13-19 12:15	
BTEX by EPA 8021B	*Extracted:*	Jun-25-19 14:00		Jun-25-19 14:00		Jun-25-19 14:00		Jun-25-19 14:00		Jun-25-19 14:00		Jun-25-19 14:00	
	Analyzed:	Jun-27-19 00:32		Jun-27-19 00:55		Jun-27-19 01:18		Jun-27-19 01:41		Jun-27-19 02:05		Jun-27-19 02:28	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00201	0.00201
Toluene		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00201	0.00201
Ethylbenzene		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00201	0.00201
m,p-Xylenes		<0.00398	0.00398	<0.00399	0.00399	<0.00400	0.00400	<0.00402	0.00402	<0.00401	0.00401	<0.00402	0.00402
o-Xylene		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00201	0.00201
Total Xylenes		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00201	0.00201
Total BTEX		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00201	0.00201
Chloride by EPA 300	*Extracted:*	Jun-21-19 11:45		Jun-21-19 11:45		Jun-21-19 11:45		Jun-21-19 11:45		Jun-21-19 11:45		Jun-21-19 11:45	
	Analyzed:	Jun-21-19 14:11		Jun-21-19 14:16		Jun-21-19 14:22		Jun-21-19 14:27		Jun-21-19 14:44		Jun-21-19 14:49	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		<4.98	4.98	19.8	4.97	130	4.81	<5.00	5.00	49.7	5.02	<5.01	5.01
TPH by SW8015 Mod	*Extracted:*	Jun-20-19 08:00		Jun-20-19 08:00		Jun-19-19 12:00		Jun-19-19 12:00		Jun-19-19 12:00		Jun-19-19 12:00	
	Analyzed:	Jun-20-19 23:13		Jun-20-19 23:38		Jun-19-19 20:32		Jun-19-19 20:58		Jun-19-19 21:23		Jun-19-19 21:49	
	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	<15.0	15.0	<14.9	14.9
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	<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	<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	<15.0	15.0	<15.0	15.0	<14.9	14.9
Total GRO-DRO		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9

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Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analytical Results 628028

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 2-24-30

Sample Id:	**PH01**	Matrix:	Soil	Date Received:	06.19.19 11.40
Lab Sample Id:	628028-001	Date Collected:	06.12.19 12.31	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	06.21.19 11.30	Basis:	Wet Weight
Seq Number:	3093262				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**42.0**	5.01	mg/kg	06.21.19 16.45		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.20.19 08.00	Basis:	Wet Weight
Seq Number:	3093109				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.20.19 14.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.20.19 14.32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.20.19 14.32	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.20.19 14.32	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.20.19 14.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	80	%	70-135	06.20.19 14.32	
o-Terphenyl	84-15-1	71	%	70-135	06.20.19 14.32	

Certificate of Analytical Results 628028

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 2-24-30

Sample Id:	**PH01**	Matrix:	Soil	Date Received:	06.19.19 11.40
Lab Sample Id:	628028-001	Date Collected:	06.12.19 12.31	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	DVM	Date Prep:	06.25.19 16.00	Basis:	Wet Weight
Seq Number:	3093581				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.26.19 09.39	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.26.19 09.39	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.26.19 09.39	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	06.26.19 09.39	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.26.19 09.39	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.26.19 09.39	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.26.19 09.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	96	%	70-130	06.26.19 09.39	
4-Bromofluorobenzene	460-00-4	106	%	70-130	06.26.19 09.39	

Certificate of Analytical Results 628028

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 2-24-30

Sample Id:	**PH01A**	Matrix:	Soil	Date Received:	06.19.19 11.40
Lab Sample Id:	628028-002	Date Collected:	06.12.19 12.35	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	06.21.19 11.30	Basis:	Wet Weight
Seq Number:	3093262				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**40.8**	5.01	mg/kg	06.21.19 16.40		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.20.19 08.00	Basis:	Wet Weight
Seq Number:	3093109				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	06.20.19 15.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	06.20.19 15.46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	06.20.19 15.46	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	06.20.19 15.46	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	06.20.19 15.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	84	%	70-135	06.20.19 15.46	
o-Terphenyl	84-15-1	71	%	70-135	06.20.19 15.46	

Certificate of Analytical Results 628028

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 2-24-30

Sample Id:	**PH01A**	Matrix:	Soil	Date Received:	06.19.19 11.40
Lab Sample Id:	628028-002	Date Collected:	06.12.19 12.35	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	DVM	Date Prep:	06.25.19 16.00	Basis:	Wet Weight
Seq Number:	3093581				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	06.26.19 10.01	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	06.26.19 10.01	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	06.26.19 10.01	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	06.26.19 10.01	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	06.26.19 10.01	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	06.26.19 10.01	U	1
Total BTEX		<0.00201	0.00201	mg/kg	06.26.19 10.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	96	%	70-130	06.26.19 10.01	
4-Bromofluorobenzene	460-00-4	106	%	70-130	06.26.19 10.01	

Certificate of Analytical Results 628028

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 2-24-30

Sample Id:	**PH02**	Matrix:	Soil	Date Received:	06.19.19 11.40
Lab Sample Id:	628028-003	Date Collected:	06.12.19 12.54	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	06.21.19 11.30	Basis:	Wet Weight
Seq Number:	3093262				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**19.8**	5.05	mg/kg	06.21.19 17.00		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.20.19 08.00	Basis:	Wet Weight
Seq Number:	3093109				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	06.20.19 16.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	06.20.19 16.11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	06.20.19 16.11	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	06.20.19 16.11	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	06.20.19 16.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	06.20.19 16.11	
o-Terphenyl	84-15-1	79	%	70-135	06.20.19 16.11	

Certificate of Analytical Results 628028

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 2-24-30

Sample Id:	**PH02**	Matrix:	Soil	Date Received:	06.19.19 11.40
Lab Sample Id:	628028-003	Date Collected:	06.12.19 12.54	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	DVM	Date Prep:	06.25.19 16.00	Basis:	Wet Weight
Seq Number:	3093581				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	06.26.19 10.24	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	06.26.19 10.24	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	06.26.19 10.24	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	06.26.19 10.24	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	06.26.19 10.24	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	06.26.19 10.24	U	1
Total BTEX		<0.00201	0.00201	mg/kg	06.26.19 10.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	94	%	70-130	06.26.19 10.24	
4-Bromofluorobenzene	460-00-4	102	%	70-130	06.26.19 10.24	

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LT Environmental, Inc., Arvada, CO

PLU Big Sinks 2-24-30

Sample Id:	**PH02A**	Matrix:	Soil	Date Received:	06.19.19 11.40
Lab Sample Id:	628028-004	Date Collected:	06.12.19 12.55	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	06.21.19 11.30	Basis:	Wet Weight
Seq Number:	3093262				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.03	5.03	mg/kg	06.21.19 17.04	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.20.19 08.00	Basis:	Wet Weight
Seq Number:	3093109				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.20.19 16.35	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.20.19 16.35	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.20.19 16.35	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.20.19 16.35	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.20.19 16.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	06.20.19 16.35	
o-Terphenyl	84-15-1	78	%	70-135	06.20.19 16.35	

Certificate of Analytical Results 628028

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 2-24-30

Sample Id:	**PH02A**	Matrix:	Soil	Date Received:	06.19.19 11.40
Lab Sample Id:	628028-004	Date Collected:	06.12.19 12.55	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	DVM	Date Prep:	06.25.19 16.00	Basis:	Wet Weight
Seq Number:	3093581				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.26.19 11.08	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.26.19 11.08	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.26.19 11.08	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	06.26.19 11.08	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.26.19 11.08	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.26.19 11.08	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.26.19 11.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	102	%	70-130	06.26.19 11.08	
1,4-Difluorobenzene	540-36-3	95	%	70-130	06.26.19 11.08	

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LT Environmental, Inc., Arvada, CO

PLU Big Sinks 2-24-30

Sample Id:	**PH03**	Matrix:	Soil	Date Received:	06.19.19 11.40
Lab Sample Id:	628028-005	Date Collected:	06.12.19 13.20	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	06.21.19 11.30	Basis:	Wet Weight
Seq Number:	3093262				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.04	5.04	mg/kg	06.21.19 17.19	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.20.19 08.00	Basis:	Wet Weight
Seq Number:	3093109				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.20.19 17.00	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.20.19 17.00	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.20.19 17.00	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.20.19 17.00	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.20.19 17.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	83	%	70-135	06.20.19 17.00	
o-Terphenyl	84-15-1	74	%	70-135	06.20.19 17.00	

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LT Environmental, Inc., Arvada, CO

PLU Big Sinks 2-24-30

Sample Id:	**PH03**	Matrix:	Soil	Date Received:	06.19.19 11.40
Lab Sample Id:	628028-005	Date Collected:	06.12.19 13.20	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	DVM	Date Prep:	06.25.19 16.00	Basis:	Wet Weight
Seq Number:	3093581				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.26.19 11.30	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.26.19 11.30	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.26.19 11.30	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	06.26.19 11.30	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.26.19 11.30	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.26.19 11.30	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.26.19 11.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	06.26.19 11.30	
1,4-Difluorobenzene	540-36-3	96	%	70-130	06.26.19 11.30	

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LT Environmental, Inc., Arvada, CO

PLU Big Sinks 2-24-30

Sample Id:	**PH03A**	Matrix:	Soil	Date Received:	06.19.19 11.40
Lab Sample Id:	628028-006	Date Collected:	06.12.19 13.25	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	06.21.19 11.30	Basis:	Wet Weight
Seq Number:	3093262				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.03	5.03	mg/kg	06.21.19 17.24	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.20.19 08.00	Basis:	Wet Weight
Seq Number:	3093109				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.20.19 17.25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.20.19 17.25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.20.19 17.25	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.20.19 17.25	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.20.19 17.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	84	%	70-135	06.20.19 17.25	
o-Terphenyl	84-15-1	78	%	70-135	06.20.19 17.25	

Certificate of Analytical Results 628028

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 2-24-30

Sample Id:	**PH03A**	Matrix:	Soil	Date Received:	06.19.19 11.40
Lab Sample Id:	628028-006	Date Collected:	06.12.19 13.25	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	DVM	Date Prep:	06.25.19 16.00	Basis:	Wet Weight
Seq Number:	3093581				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.26.19 11.52	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.26.19 11.52	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.26.19 11.52	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	06.26.19 11.52	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.26.19 11.52	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.26.19 11.52	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.26.19 11.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	112	%	70-130	06.26.19 11.52	
1,4-Difluorobenzene	540-36-3	98	%	70-130	06.26.19 11.52	

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LT Environmental, Inc., Arvada, CO

PLU Big Sinks 2-24-30

Sample Id:	**PH04**	Matrix:	Soil	Date Received:	06.19.19 11.40
Lab Sample Id:	628028-007	Date Collected:	06.12.19 13.57	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	06.21.19 11.30	Basis:	Wet Weight
Seq Number:	3093262				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**40.4**	5.03	mg/kg	06.21.19 17.29		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.20.19 08.00	Basis:	Wet Weight
Seq Number:	3093109				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.20.19 17.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.20.19 17.50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.20.19 17.50	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.20.19 17.50	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.20.19 17.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	77	%	70-135	06.20.19 17.50	
o-Terphenyl	84-15-1	64	%	70-135	06.20.19 17.50	**

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LT Environmental, Inc., Arvada, CO

PLU Big Sinks 2-24-30

Sample Id:	**PH04**	Matrix:	Soil	Date Received:	06.19.19 11.40
Lab Sample Id:	628028-007	Date Collected:	06.12.19 13.57	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	DVM	Date Prep:	06.25.19 16.00	Basis:	Wet Weight
Seq Number:	3093581				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	06.26.19 12.14	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	06.26.19 12.14	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	06.26.19 12.14	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	06.26.19 12.14	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	06.26.19 12.14	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	06.26.19 12.14	U	1
Total BTEX		<0.00199	0.00199	mg/kg	06.26.19 12.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	06.26.19 12.14	
4-Bromofluorobenzene	460-00-4	108	%	70-130	06.26.19 12.14	

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LT Environmental, Inc., Arvada, CO

PLU Big Sinks 2-24-30

Sample Id:	**PH04A**	Matrix:	Soil	Date Received:	06.19.19 11.40
Lab Sample Id:	628028-008	Date Collected:	06.12.19 14.00	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	06.21.19 11.30	Basis:	Wet Weight
Seq Number:	3093262				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**16.7**	5.01	mg/kg	06.21.19 17.33		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.20.19 08.00	Basis:	Wet Weight
Seq Number:	3093109				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.20.19 18.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.20.19 18.15	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.20.19 18.15	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.20.19 18.15	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.20.19 18.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	83	%	70-135	06.20.19 18.15	
o-Terphenyl	84-15-1	84	%	70-135	06.20.19 18.15	

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LT Environmental, Inc., Arvada, CO

PLU Big Sinks 2-24-30

Sample Id:	**PH04A**	Matrix:	Soil	Date Received:	06.19.19 11.40
Lab Sample Id:	628028-008	Date Collected:	06.12.19 14.00	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	DVM	Date Prep:	06.25.19 16.00	Basis:	Wet Weight
Seq Number:	3093581				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	06.26.19 12.36	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	06.26.19 12.36	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	06.26.19 12.36	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	06.26.19 12.36	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	06.26.19 12.36	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	06.26.19 12.36	U	1
Total BTEX		<0.00198	0.00198	mg/kg	06.26.19 12.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	97	%	70-130	06.26.19 12.36	
4-Bromofluorobenzene	460-00-4	105	%	70-130	06.26.19 12.36	

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LT Environmental, Inc., Arvada, CO

PLU Big Sinks 2-24-30

Sample Id:	**PH05**	Matrix:	Soil	Date Received:	06.19.19 11.40
Lab Sample Id:	628028-009	Date Collected:	06.12.19 14.28	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	06.21.19 11.30	Basis:	Wet Weight
Seq Number:	3093262				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**10.8**	4.99	mg/kg	06.21.19 17.38		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.20.19 08.00	Basis:	Wet Weight
Seq Number:	3093109				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.20.19 18.39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.20.19 18.39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.20.19 18.39	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.20.19 18.39	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.20.19 18.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	06.20.19 18.39	
o-Terphenyl	84-15-1	88	%	70-135	06.20.19 18.39	

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LT Environmental, Inc., Arvada, CO

PLU Big Sinks 2-24-30

Sample Id:	**PH05**	Matrix:	Soil	Date Received:	06.19.19 11.40
Lab Sample Id:	628028-009	Date Collected:	06.12.19 14.28	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	DVM	Date Prep:	06.25.19 14.00	Basis:	Wet Weight
Seq Number:	3093723				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	06.26.19 16.50	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	06.26.19 16.50	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	06.26.19 16.50	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	06.26.19 16.50	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	06.26.19 16.50	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	06.26.19 16.50	U	1
Total BTEX		<0.00201	0.00201	mg/kg	06.26.19 16.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	112	%	70-130	06.26.19 16.50	
1,4-Difluorobenzene	540-36-3	101	%	70-130	06.26.19 16.50	

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Sample Id:	**PH05A**	Matrix:	Soil	Date Received:	06.19.19 11.40
Lab Sample Id:	628028-010	Date Collected:	06.12.19 14.35	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	06.21.19 11.30	Basis:	Wet Weight
Seq Number:	3093262				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**276**	5.03	mg/kg	06.21.19 17.50		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.20.19 08.00	Basis:	Wet Weight
Seq Number:	3093109				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.20.19 19.04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.20.19 19.04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.20.19 19.04	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.20.19 19.04	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.20.19 19.04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	77	%	70-135	06.20.19 19.04	
o-Terphenyl	84-15-1	72	%	70-135	06.20.19 19.04	

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Sample Id:	**PH05A**	Matrix:	Soil	Date Received:	06.19.19 11.40
Lab Sample Id:	628028-010	Date Collected:	06.12.19 14.35	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	DVM	Date Prep:	06.25.19 14.00	Basis:	Wet Weight
Seq Number:	3093723				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	06.26.19 17.14	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	06.26.19 17.14	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	06.26.19 17.14	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	06.26.19 17.14	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	06.26.19 17.14	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	06.26.19 17.14	U	1
Total BTEX		<0.00201	0.00201	mg/kg	06.26.19 17.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	126	%	70-130	06.26.19 17.14	
1,4-Difluorobenzene	540-36-3	97	%	70-130	06.26.19 17.14	

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Sample Id:	**PH06**	Matrix:	Soil	Date Received:	06.19.19 11.40
Lab Sample Id:	628028-011	Date Collected:	06.12.19 14.53	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	06.21.19 11.30	Basis:	Wet Weight
Seq Number:	3093262				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**6.87**	5.03	mg/kg	06.21.19 17.55		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.20.19 08.00	Basis:	Wet Weight
Seq Number:	3093109				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.20.19 19.54	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.20.19 19.54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.20.19 19.54	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.20.19 19.54	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.20.19 19.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	06.20.19 19.54	
o-Terphenyl	84-15-1	72	%	70-135	06.20.19 19.54	

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LT Environmental, Inc., Arvada, CO

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Sample Id:	**PH06**	Matrix:	Soil	Date Received:	06.19.19 11.40
Lab Sample Id:	628028-011	Date Collected:	06.12.19 14.53	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	DVM	Date Prep:	06.25.19 14.00	Basis:	Wet Weight
Seq Number:	3093723				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.26.19 17.37	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.26.19 17.37	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.26.19 17.37	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	06.26.19 17.37	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.26.19 17.37	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.26.19 17.37	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.26.19 17.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	109	%	70-130	06.26.19 17.37	
1,4-Difluorobenzene	540-36-3	101	%	70-130	06.26.19 17.37	

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Sample Id:	**PH06A**	Matrix:	Soil	Date Received:	06.19.19 11.40
Lab Sample Id:	628028-012	Date Collected:	06.12.19 14.55	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	06.21.19 11.45	Basis:	Wet Weight
Seq Number:	3093266				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**21.7**	5.03	mg/kg	06.21.19 13.10		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.20.19 08.00	Basis:	Wet Weight
Seq Number:	3093109				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.20.19 20.19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.20.19 20.19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.20.19 20.19	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.20.19 20.19	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.20.19 20.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	77	%	70-135	06.20.19 20.19	
o-Terphenyl	84-15-1	67	%	70-135	06.20.19 20.19	**

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Sample Id:	**PH06A**	Matrix:	Soil	Date Received:	06.19.19 11.40
Lab Sample Id:	628028-012	Date Collected:	06.12.19 14.55	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	DVM	Date Prep:	06.25.19 14.00	Basis:	Wet Weight
Seq Number:	3093723				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.26.19 18.00	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.26.19 18.00	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.26.19 18.00	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	06.26.19 18.00	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.26.19 18.00	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.26.19 18.00	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.26.19 18.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	06.26.19 18.00	
4-Bromofluorobenzene	460-00-4	109	%	70-130	06.26.19 18.00	

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LT Environmental, Inc., Arvada, CO

PLU Big Sinks 2-24-30

Sample Id:	**PH07**	Matrix:	Soil	Date Received:	06.19.19 11.40
Lab Sample Id:	628028-013	Date Collected:	06.12.19 15.20	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	06.21.19 11.45	Basis:	Wet Weight
Seq Number:	3093266				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**42.8**	4.96	mg/kg	06.21.19 13.27		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.20.19 08.00	Basis:	Wet Weight
Seq Number:	3093109				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	06.20.19 20.44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	06.20.19 20.44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	06.20.19 20.44	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	06.20.19 20.44	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	06.20.19 20.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	78	%	70-135	06.20.19 20.44	
o-Terphenyl	84-15-1	63	%	70-135	06.20.19 20.44	**

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PLU Big Sinks 2-24-30

Sample Id:	**PH07**	Matrix:	Soil	Date Received:	06.19.19 11.40
Lab Sample Id:	628028-013	Date Collected:	06.12.19 15.20	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	DVM	Date Prep:	06.25.19 14.00	Basis:	Wet Weight
Seq Number:	3093723				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.26.19 18.23	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.26.19 18.23	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.26.19 18.23	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	06.26.19 18.23	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.26.19 18.23	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.26.19 18.23	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.26.19 18.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	06.26.19 18.23	
4-Bromofluorobenzene	460-00-4	109	%	70-130	06.26.19 18.23	

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LT Environmental, Inc., Arvada, CO

PLU Big Sinks 2-24-30

Sample Id:	**PH07A**	Matrix:	Soil	Date Received:	06.19.19 11.40
Lab Sample Id:	628028-014	Date Collected:	06.12.19 15.26	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	06.21.19 11.45	Basis:	Wet Weight
Seq Number:	3093266				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**31.1**	4.98	mg/kg	06.21.19 13.32		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.20.19 08.00	Basis:	Wet Weight
Seq Number:	3093109				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.20.19 21.09	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.20.19 21.09	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.20.19 21.09	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.20.19 21.09	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.20.19 21.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	06.20.19 21.09	
o-Terphenyl	84-15-1	71	%	70-135	06.20.19 21.09	

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LT Environmental, Inc., Arvada, CO

PLU Big Sinks 2-24-30

Sample Id:	**PH07A**	Matrix:	Soil	Date Received:	06.19.19 11.40
Lab Sample Id:	628028-014	Date Collected:	06.12.19 15.26	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	DVM	Date Prep:	06.25.19 14.00	Basis:	Wet Weight
Seq Number:	3093723				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	06.26.19 18.46	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	06.26.19 18.46	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	06.26.19 18.46	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	06.26.19 18.46	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	06.26.19 18.46	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	06.26.19 18.46	U	1
Total BTEX		<0.00201	0.00201	mg/kg	06.26.19 18.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	110	%	70-130	06.26.19 18.46	
1,4-Difluorobenzene	540-36-3	102	%	70-130	06.26.19 18.46	

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LT Environmental, Inc., Arvada, CO

PLU Big Sinks 2-24-30

Sample Id:	**PH08**	Matrix:	Soil	Date Received:	06.19.19 11.40
Lab Sample Id:	628028-015	Date Collected:	06.13.19 08.35	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	06.21.19 11.45	Basis:	Wet Weight
Seq Number:	3093266				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**35.4**	4.98	mg/kg	06.21.19 13.38		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.20.19 08.00	Basis:	Wet Weight
Seq Number:	3093109				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.20.19 21.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.20.19 21.34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.20.19 21.34	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.20.19 21.34	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.20.19 21.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	71	%	70-135	06.20.19 21.34	
o-Terphenyl	84-15-1	61	%	70-135	06.20.19 21.34	**

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PLU Big Sinks 2-24-30

Sample Id:	**PH08**	Matrix:	Soil	Date Received:	06.19.19 11.40
Lab Sample Id:	628028-015	Date Collected:	06.13.19 08.35	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	DVM	Date Prep:	06.25.19 14.00	Basis:	Wet Weight
Seq Number:	3093723				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	06.26.19 21.36	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	06.26.19 21.36	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	06.26.19 21.36	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	06.26.19 21.36	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	06.26.19 21.36	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	06.26.19 21.36	U	1
Total BTEX		<0.00201	0.00201	mg/kg	06.26.19 21.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	110	%	70-130	06.26.19 21.36	
1,4-Difluorobenzene	540-36-3	95	%	70-130	06.26.19 21.36	

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Sample Id:	**PH08A**	Matrix:	Soil	Date Received:	06.19.19 11.40
Lab Sample Id:	628028-016	Date Collected:	06.13.19 08.45	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	06.21.19 11.45	Basis:	Wet Weight
Seq Number:	3093266				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.04	5.04	mg/kg	06.21.19 13.43	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.20.19 08.00	Basis:	Wet Weight
Seq Number:	3093109				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.20.19 21.59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.20.19 21.59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.20.19 21.59	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.20.19 21.59	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.20.19 21.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	06.20.19 21.59	
o-Terphenyl	84-15-1	87	%	70-135	06.20.19 21.59	

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Sample Id:	**PH08A**	Matrix:	Soil	Date Received:	06.19.19 11.40
Lab Sample Id:	628028-016	Date Collected:	06.13.19 08.45	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	DVM	Date Prep:	06.25.19 14.00	Basis:	Wet Weight
Seq Number:	3093723				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.26.19 21.59	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.26.19 21.59	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.26.19 21.59	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	06.26.19 21.59	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.26.19 21.59	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.26.19 21.59	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.26.19 21.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	115	%	70-130	06.26.19 21.59	
1,4-Difluorobenzene	540-36-3	96	%	70-130	06.26.19 21.59	

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PLU Big Sinks 2-24-30

Sample Id:	**PH09**	Matrix:	Soil	Date Received:	06.19.19 11.40
Lab Sample Id:	628028-017	Date Collected:	06.13.19 08.55	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	06.21.19 11.45	Basis:	Wet Weight
Seq Number:	3093266				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**49.3**	5.03	mg/kg	06.21.19 14.00		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.20.19 08.00	Basis:	Wet Weight
Seq Number:	3093109				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.20.19 22.23	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.20.19 22.23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.20.19 22.23	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.20.19 22.23	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.20.19 22.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	81	%	70-135	06.20.19 22.23	
o-Terphenyl	84-15-1	71	%	70-135	06.20.19 22.23	

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Sample Id:	**PH09**	Matrix:	Soil	Date Received:	06.19.19 11.40
Lab Sample Id:	628028-017	Date Collected:	06.13.19 08.55	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	DVM	Date Prep:	06.25.19 14.00	Basis:	Wet Weight
Seq Number:	3093723				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.26.19 22.22	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.26.19 22.22	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.26.19 22.22	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	06.26.19 22.22	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.26.19 22.22	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.26.19 22.22	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.26.19 22.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	96	%	70-130	06.26.19 22.22	
4-Bromofluorobenzene	460-00-4	115	%	70-130	06.26.19 22.22	

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Sample Id:	**PH09A**	Matrix:	Soil	Date Received:	06.19.19 11.40
Lab Sample Id:	628028-018	Date Collected:	06.13.19 09.05	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	06.21.19 11.45	Basis:	Wet Weight
Seq Number:	3093266				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**686**	5.03	mg/kg	06.21.19 14.05		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.20.19 08.00	Basis:	Wet Weight
Seq Number:	3093109				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.20.19 22.48	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.20.19 22.48	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.20.19 22.48	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.20.19 22.48	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.20.19 22.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	06.20.19 22.48	
o-Terphenyl	84-15-1	81	%	70-135	06.20.19 22.48	

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Sample Id:	**PH09A**	Matrix:	Soil	Date Received:	06.19.19 11.40
Lab Sample Id:	628028-018	Date Collected:	06.13.19 09.05	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	DVM	Date Prep:	06.25.19 14.00	Basis:	Wet Weight
Seq Number:	3093723				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.26.19 22.45	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.26.19 22.45	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.26.19 22.45	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	06.26.19 22.45	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.26.19 22.45	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.26.19 22.45	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.26.19 22.45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	117	%	70-130	06.26.19 22.45	
1,4-Difluorobenzene	540-36-3	96	%	70-130	06.26.19 22.45	

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Sample Id:	**PH10**	Matrix:	Soil	Date Received:	06.19.19 11.40
Lab Sample Id:	628028-019	Date Collected:	06.13.19 09.20	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	06.21.19 11.45	Basis:	Wet Weight
Seq Number:	3093266				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.98	4.98	mg/kg	06.21.19 14.11	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.20.19 08.00	Basis:	Wet Weight
Seq Number:	3093109				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.20.19 23.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.20.19 23.13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.20.19 23.13	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.20.19 23.13	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.20.19 23.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	06.20.19 23.13	
o-Terphenyl	84-15-1	89	%	70-135	06.20.19 23.13	

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PLU Big Sinks 2-24-30

Sample Id:	**PH10**	Matrix:	Soil	Date Received:	06.19.19 11.40
Lab Sample Id:	628028-019	Date Collected:	06.13.19 09.20	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	DVM	Date Prep:	06.25.19 14.00	Basis:	Wet Weight
Seq Number:	3093723				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	06.27.19 00.32	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	06.27.19 00.32	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	06.27.19 00.32	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	06.27.19 00.32	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	06.27.19 00.32	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	06.27.19 00.32	U	1
Total BTEX		<0.00199	0.00199	mg/kg	06.27.19 00.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	129	%	70-130	06.27.19 00.32	
1,4-Difluorobenzene	540-36-3	88	%	70-130	06.27.19 00.32	

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PLU Big Sinks 2-24-30

Sample Id:	**PH10A**	Matrix:	Soil	Date Received:	06.19.19 11.40
Lab Sample Id:	628028-020	Date Collected:	06.13.19 09.25	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	06.21.19 11.45	Basis:	Wet Weight
Seq Number:	3093266				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**19.8**	4.97	mg/kg	06.21.19 14.16		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.20.19 08.00	Basis:	Wet Weight
Seq Number:	3093109				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.20.19 23.38	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.20.19 23.38	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.20.19 23.38	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.20.19 23.38	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.20.19 23.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	06.20.19 23.38	
o-Terphenyl	84-15-1	80	%	70-135	06.20.19 23.38	

Certificate of Analytical Results 628028

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 2-24-30

Sample Id:	**PH10A**	Matrix:	Soil	Date Received:	06.19.19 11.40
Lab Sample Id:	628028-020	Date Collected:	06.13.19 09.25	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	DVM	Date Prep:	06.25.19 14.00	Basis:	Wet Weight
Seq Number:	3093723				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.27.19 00.55	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.27.19 00.55	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.27.19 00.55	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	06.27.19 00.55	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.27.19 00.55	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.27.19 00.55	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.27.19 00.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	121	%	70-130	06.27.19 00.55	
1,4-Difluorobenzene	540-36-3	93	%	70-130	06.27.19 00.55	

Certificate of Analytical Results 628028

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 2-24-30

Sample Id:	**PH11**	Matrix:	Soil	Date Received:	06.19.19 11.40
Lab Sample Id:	628028-021	Date Collected:	06.13.19 09.35	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	06.21.19 11.45	Basis:	Wet Weight
Seq Number:	3093266				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**130**	4.81	mg/kg	06.21.19 14.22		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.19.19 12.00	Basis:	Wet Weight
Seq Number:	3092946				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.19.19 20.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.19.19 20.32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.19.19 20.32	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.19.19 20.32	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.19.19 20.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	06.19.19 20.32	
o-Terphenyl	84-15-1	99	%	70-135	06.19.19 20.32	

Certificate of Analytical Results 628028

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 2-24-30

Sample Id:	**PH11**	Matrix:	Soil	Date Received:	06.19.19 11.40
Lab Sample Id:	628028-021	Date Collected:	06.13.19 09.35	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	DVM	Date Prep:	06.25.19 14.00	Basis:	Wet Weight
Seq Number:	3093723				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.27.19 01.18	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.27.19 01.18	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.27.19 01.18	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	06.27.19 01.18	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.27.19 01.18	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.27.19 01.18	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.27.19 01.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	91	%	70-130	06.27.19 01.18	
4-Bromofluorobenzene	460-00-4	128	%	70-130	06.27.19 01.18	

Certificate of Analytical Results 628028

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 2-24-30

Sample Id:	**PH11A**	Matrix:	Soil	Date Received:	06.19.19 11.40
Lab Sample Id:	628028-022	Date Collected:	06.13.19 09.45	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	06.21.19 11.45	Basis:	Wet Weight
Seq Number:	3093266				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	06.21.19 14.27	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.19.19 12.00	Basis:	Wet Weight
Seq Number:	3092946				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.19.19 20.58	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.19.19 20.58	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.19.19 20.58	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.19.19 20.58	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.19.19 20.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	06.19.19 20.58	
o-Terphenyl	84-15-1	93	%	70-135	06.19.19 20.58	

Certificate of Analytical Results 628028

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 2-24-30

Sample Id:	**PH11A**	Matrix:	Soil	Date Received:	06.19.19 11.40
Lab Sample Id:	628028-022	Date Collected:	06.13.19 09.45	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	DVM	Date Prep:	06.25.19 14.00	Basis:	Wet Weight
Seq Number:	3093723				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	06.27.19 01.41	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	06.27.19 01.41	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	06.27.19 01.41	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	06.27.19 01.41	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	06.27.19 01.41	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	06.27.19 01.41	U	1
Total BTEX		<0.00201	0.00201	mg/kg	06.27.19 01.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	122	%	70-130	06.27.19 01.41	
1,4-Difluorobenzene	540-36-3	93	%	70-130	06.27.19 01.41	

Certificate of Analytical Results 628028

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 2-24-30

Sample Id:	**PH12**	Matrix:	Soil	Date Received:	06.19.19 11.40
Lab Sample Id:	628028-023	Date Collected:	06.13.19 12.05	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	06.21.19 11.45	Basis:	Wet Weight
Seq Number:	3093266				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**49.7**	5.02	mg/kg	06.21.19 14.44		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.19.19 12.00	Basis:	Wet Weight
Seq Number:	3092946				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.19.19 21.23	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.19.19 21.23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.19.19 21.23	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.19.19 21.23	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.19.19 21.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	06.19.19 21.23	
o-Terphenyl	84-15-1	89	%	70-135	06.19.19 21.23	

Certificate of Analytical Results 628028

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 2-24-30

Sample Id:	**PH12**	Matrix:	Soil	Date Received:	06.19.19 11.40
Lab Sample Id:	628028-023	Date Collected:	06.13.19 12.05	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	DVM	Date Prep:	06.25.19 14.00	Basis:	Wet Weight
Seq Number:	3093723				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.27.19 02.05	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.27.19 02.05	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.27.19 02.05	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	06.27.19 02.05	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.27.19 02.05	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.27.19 02.05	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.27.19 02.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	92	%	70-130	06.27.19 02.05	
4-Bromofluorobenzene	460-00-4	125	%	70-130	06.27.19 02.05	

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LT Environmental, Inc., Arvada, CO

PLU Big Sinks 2-24-30

Sample Id:	**PH12A**	Matrix:	Soil	Date Received:	06.19.19 11.40
Lab Sample Id:	628028-024	Date Collected:	06.13.19 12.15	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	06.21.19 11.45	Basis:	Wet Weight
Seq Number:	3093266				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.01	5.01	mg/kg	06.21.19 14.49	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.19.19 12.00	Basis:	Wet Weight
Seq Number:	3092946				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	06.19.19 21.49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	06.19.19 21.49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	06.19.19 21.49	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	06.19.19 21.49	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	06.19.19 21.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	06.19.19 21.49	
o-Terphenyl	84-15-1	83	%	70-135	06.19.19 21.49	

Certificate of Analytical Results 628028

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 2-24-30

Sample Id:	**PH12A**	Matrix:	Soil	Date Received:	06.19.19 11.40
Lab Sample Id:	628028-024	Date Collected:	06.13.19 12.15	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	DVM	Date Prep:	06.25.19 14.00	Basis:	Wet Weight
Seq Number:	3093723				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	06.27.19 02.28	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	06.27.19 02.28	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	06.27.19 02.28	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	06.27.19 02.28	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	06.27.19 02.28	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	06.27.19 02.28	U	1
Total BTEX		<0.00201	0.00201	mg/kg	06.27.19 02.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	125	%	70-130	06.27.19 02.28	
1,4-Difluorobenzene	540-36-3	93	%	70-130	06.27.19 02.28	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 628028

LT Environmental, Inc.

PLU Big Sinks 2-24-30

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3093262 Matrix: Solid Date Prep: 06.21.19
MB Sample Id: 7680447-1-BLK LCS Sample Id: 7680447-1-BKS LCSD Sample Id: 7680447-1-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	242	97	242	97	90-110	0	20	mg/kg	06.21.19 15:28	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3093266 Matrix: Solid Date Prep: 06.21.19
MB Sample Id: 7680449-1-BLK LCS Sample Id: 7680449-1-BKS LCSD Sample Id: 7680449-1-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	233	93	234	94	90-110	0	20	mg/kg	06.21.19 12:59	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3093262 Matrix: Soil Date Prep: 06.21.19
Parent Sample Id: 627984-005 MS Sample Id: 627984-005 S MSD Sample Id: 627984-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	457	252	666	83	666	83	90-110	0	20	mg/kg	06.21.19 15:42	X

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3093262 Matrix: Soil Date Prep: 06.21.19
Parent Sample Id: 628028-001 MS Sample Id: 628028-001 S MSD Sample Id: 628028-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	42.0	251	296	101	296	101	90-110	0	20	mg/kg	06.21.19 16:50	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3093266 Matrix: Soil Date Prep: 06.21.19
Parent Sample Id: 628028-012 MS Sample Id: 628028-012 S MSD Sample Id: 628028-012 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	21.7	252	260	95	260	95	90-110	0	20	mg/kg	06.21.19 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

QC Summary 628028

LT Environmental, Inc.

PLU Big Sinks 2-24-30

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3093266 Matrix: Soil Date Prep: 06.21.19
Parent Sample Id: 628028-022 MS Sample Id: 628028-022 S MSD Sample Id: 628028-022 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	4.87	250	258	101	257	101	90-110	0	20	mg/kg	06.21.19 14:33	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3092946 Matrix: Solid Date Prep: 06.19.19
MB Sample Id: 7680347-1-BLK LCS Sample Id: 7680347-1-BKS LCSD Sample Id: 7680347-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	10.1	1000	855	86	813	81	70-135	5	20	mg/kg	06.19.19 12:31	
Diesel Range Organics (DRO)	<8.13	1000	844	84	807	81	70-135	4	20	mg/kg	06.19.19 12:31	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	99		94		85		70-135	%	06.19.19 12:31
o-Terphenyl	92		99		86		70-135	%	06.19.19 12:31

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3093109 Matrix: Solid Date Prep: 06.20.19
MB Sample Id: 7680419-1-BLK LCS Sample Id: 7680419-1-BKS LCSD Sample Id: 7680419-1-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)	<15.0	1000	912	91	832	83	70-135	9	20	mg/kg	06.20.19 13:43	
Diesel Range Organics (DRO)	<8.13	1000	909	91	871	87	70-135	4	20	mg/kg	06.20.19 13:43	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	83		97		93		70-135	%	06.20.19 13:43
o-Terphenyl	74		101		109		70-135	%	06.20.19 13:43

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3092946 Matrix: Soil Date Prep: 06.19.19
Parent Sample Id: 628025-001 MS Sample Id: 628025-001 S MSD Sample Id: 628025-001 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)	13.7	999	927	91	944	93	70-135	2	20	mg/kg	06.19.19 13:46	
Diesel Range Organics (DRO)	8.15	999	914	91	933	93	70-135	2	20	mg/kg	06.19.19 13:46	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	93		94		70-135	%	06.19.19 13:46
o-Terphenyl	93		91		70-135	%	06.19.19 13:46

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

QC Summary 628028

LT Environmental, Inc.

PLU Big Sinks 2-24-30

Analytical Method: TPH by SW8015 Mod | Prep Method: TX1005P
Seq Number: 3093109 | Matrix: Soil | Date Prep: 06.20.19
Parent Sample Id: 628028-001 | MS Sample Id: 628028-001 S | MSD Sample Id: 628028-001 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)	<15.0	999	826	83	861	86	70-135	4	20	mg/kg	06.20.19 14:57	
Diesel Range Organics (DRO)	11.6	999	804	79	837	83	70-135	4	20	mg/kg	06.20.19 14:57	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	76		82		70-135	%	06.20.19 14:57
o-Terphenyl	80		78		70-135	%	06.20.19 14:57

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3093723 | Matrix: Solid | Date Prep: 06.25.19
MB Sample Id: 7680761-1-BLK | LCS Sample Id: 7680761-1-BKS | LCSD Sample Id: 7680761-1-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	0.0994	0.0851	86	0.0936	94	70-130	10	35	mg/kg	06.26.19 19:56	
Toluene	<0.000453	0.0994	0.0953	96	0.102	102	70-130	7	35	mg/kg	06.26.19 19:56	
Ethylbenzene	<0.000561	0.0994	0.0973	98	0.106	106	70-130	9	35	mg/kg	06.26.19 19:56	
m,p-Xylenes	<0.00101	0.199	0.192	96	0.208	104	70-130	8	35	mg/kg	06.26.19 19:56	
o-Xylene	0.000431	0.0994	0.0939	94	0.101	101	70-130	7	35	mg/kg	06.26.19 19:56	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		96		95		70-130	%	06.26.19 19:56
4-Bromofluorobenzene	105		106		107		70-130	%	06.26.19 19:56

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3093581 | Matrix: Solid | Date Prep: 06.25.19
MB Sample Id: 7680757-1-BLK | LCS Sample Id: 7680757-1-BKS | LCSD Sample Id: 7680757-1-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	0.0876	88	0.0955	96	70-130	9	35	mg/kg	06.26.19 01:46	
Toluene	<0.00200	0.100	0.0881	88	0.0976	98	70-130	10	35	mg/kg	06.26.19 01:46	
Ethylbenzene	<0.00200	0.100	0.0923	92	0.0997	100	70-130	8	35	mg/kg	06.26.19 01:46	
m,p-Xylenes	<0.00401	0.200	0.184	92	0.199	100	70-130	8	35	mg/kg	06.26.19 01:46	
o-Xylene	<0.00200	0.100	0.0868	87	0.0951	95	70-130	9	35	mg/kg	06.26.19 01:46	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	96		93		98		70-130	%	06.26.19 01:46
4-Bromofluorobenzene	104		98		108		70-130	%	06.26.19 01:46

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

QC Summary 628028

LT Environmental, Inc.

PLU Big Sinks 2-24-30

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3093723 Matrix: Soil Date Prep: 06.25.19
Parent Sample Id: 628028-009 MS Sample Id: 628028-009 S MSD Sample Id: 628028-009 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.0993	99	0.0998	100	70-130	1	35	mg/kg	06.26.19 19:09	
Toluene	0.000552	0.0998	0.102	102	0.103	102	70-130	1	35	mg/kg	06.26.19 19:09	
Ethylbenzene	0.000763	0.0998	0.103	102	0.103	102	70-130	0	35	mg/kg	06.26.19 19:09	
m,p-Xylenes	<0.00101	0.200	0.205	103	0.208	103	70-130	1	35	mg/kg	06.26.19 19:09	
o-Xylene	0.000612	0.0998	0.100	100	0.101	100	70-130	1	35	mg/kg	06.26.19 19:09	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		98		70-130	%	06.26.19 19:09
4-Bromofluorobenzene	107		104		70-130	%	06.26.19 19:09

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3093581 Matrix: Soil Date Prep: 06.25.19
Parent Sample Id: 628028-008 MS Sample Id: 628028-008 S MSD Sample Id: 628028-008 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	0.0832	84	0.0843	84	70-130	1	35	mg/kg	06.26.19 02:30	
Toluene	<0.00199	0.0994	0.0828	83	0.0821	82	70-130	1	35	mg/kg	06.26.19 02:30	
Ethylbenzene	<0.00199	0.0994	0.0856	86	0.0879	88	70-130	3	35	mg/kg	06.26.19 02:30	
m,p-Xylenes	<0.00398	0.199	0.171	86	0.178	89	70-130	4	35	mg/kg	06.26.19 02:30	
o-Xylene	<0.00199	0.0994	0.0838	84	0.0854	86	70-130	2	35	mg/kg	06.26.19 02:30	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		97		70-130	%	06.26.19 02:30
4-Bromofluorobenzene	113		111		70-130	%	06.26.19 02:30

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

Chain of Custody

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

Work Order No: 620028

Page 1 of 3

Project Manager:	Ashley Ager	Bill to: (if different)	Kyle Littrel
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO-Energy
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM
Phone:	432.704.5178 Email:	aager@ltenv.com rmcafee@ltenv.com	

Work Order Comments

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

Project Name:	PLU Big Sinks 2-24-30	Turn Around	
Project Number:		Routine ☐	
P.O. Number:		Rush: 4 day	
Sampler's Name:	Robert McAfee	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	0.4 | 0.4	Thermometer ID	IR6
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Total Containers:	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
PH01	S	06/12/19	1231	2'	1	X	X	X
PH01A			1235	4'		X	X	X
PH02			1254	3'		X	X	X
PH02A			1255	4'		X	X	X
PH03			1320	2'		X	X	X
PH03A			1325	4'		X	X	X
PH04			1357	2'		X	X	X
PH04A			1400	4'		X	X	X
PH05			1428	1'		X	X	X
PH05A			1435	4'		X	X	X

Work Order Notes

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

Sample Comments

discrete

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Robert McAfee	Courtney	6/14/19 16:55	2		
3				4		
5				6		

Revised Date 051418 Rev. 2018.1

Chain of Custody

XENCO LABORATORIES

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

Work Order No: 628028

www.xenco.com Page 2 of 3

Project Manager:	Ashley Ager	Bill to: (if different)	Kyle Littrel
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO-Energy
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM
Phone:	432.704.5178	Email:	aager@ltenv.com rmcafee@ltenv.com

Work Order Comments

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

Project Name:	PLU Big Sinks 2-24-20	Turn Around	
Project Number:		Routine	☐
P.O. Number:		Rush:	4 day
Sampler's Name:	Robert McAfee	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	Yes No	
Temperature (°C):	0.4	Thermometer ID		
Received Intact:	Yes No			
Cooler Custody Seals:	Yes No N/A	Correction Factor:		
Sample Custody Seals:	Yes No N/A	Total Containers:		

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
PH06	S	06/12/19	1453	3'	1	X	X	X
PH06A			1455	4'		X	X	X
PH07			1520	1'		X	X	X
PH07A			1526	4'		X	X	X
PH08		06/13/19	0835	2'		X	X	X
PH08A			0845	4'		X	X	X
PH09			0855	2'		X	X	X
PH09A			0905	4'		X	X	X
PH10			0920	3'		X	X	X
PH10A			0925	4'		X	X	X

ANALYSIS REQUEST

Work Order Notes

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

Sample Comments

discrete

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Robert McAfee		6/14/19 16:55	2		
			4		
			6		

Revised Date 051418 Rev. 2018.1

Chain of Custody

XENCO LABORATORIES

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

Work Order No: 628058

www.xenco.com Page 3 of 3

Project Manager:	Ashley Ager	Bill to: (if different)	Kyle Littrel
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO-Energy
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM
Phone:	432.704.5178	Email:	aager@ltenv.com rmcafee@ltenv.com

Work Order Comments

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

Project Name:	PLU Big Sink 2-24-30	Turn Around	
Project Number:		Routine	☐
P.O. Number:		Rush:	4 day
Sampler's Name:	Robert McAfee	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	Yes No	
Temperature (°C):	0.1 corr	Thermometer ID		
Received Intact:	Yes No			
Cooler Custody Seals:	Yes No N/A	Correction Factor:		
Sample Custody Seals:	Yes No N/A	Total Containers:		

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)	Sample Comments
PH11	S	06/13/19	0935	2'	1	x	x	x	discrete
PH11A			0945	4'		x	x	x	
PH12			1205	2'		x	x	x	
PH12A			1215	4'		x	x	x	

Work Order Notes

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

ANALYSIS REQUEST

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn

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

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			2		
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 06/19/2019 11:40:00 AM

Work Order #: 628028

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
#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: 06/19/2019

Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 06/19/2019

Jessica Kramer

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 191605

CONDITIONS

Operator: XTO PERMIAN OPERATING LLC. 6401 HOLIDAY HILL ROAD MIDLAND, TX 79707	OGRID: 373075
	Action Number: 191605
	Action Type: [IM-SD] Incident File Support Doc (ENV) (IM-BNF)

CONDITIONS

Created By	Condition	Condition Date
bhall	Site will need to meet the requirements of 19.15.29.13 NMAC at time of plugging and abandonment.	2/28/2023