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

May 19, 2020

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

RE: Closure Request
WPX Energy Permian, LLC.
RDX Federal 28 #024
Incident ID NVV2002831233
Eddy County, New Mexico

Dear Mr. Bratcher:

LT Environmental, Inc. (LTE), on behalf of WPX Energy Permian, LLC. (WPX), presents the following Closure Request detailing soil sampling and excavation activities at the RDX Federal 28 #024 (Site) in Unit H, Section 28, Township 26 South, Range 30 East, in Eddy County, New Mexico (Figure 1). The purpose of the soil sampling and excavation activities was to address impacts to soil following an event that resulted in the release of produced water and crude oil onto the well pad surface. Based on the excavation activities and results of the soil sampling events, WPX requests no further action (NFA).

BACKGROUND

On January 12, 2020, a failed subsurface flowline resulted in the release of approximately 20 barrels (bbls) of produced water and 13 bbls of crude oil onto the well pad surface. Vacuum trucks were dispatched and recovered a total of 10 bbls of produced water and 10 bbls of crude oil. WPX reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 (Form C-141) on January 15, 2020, and the release event was subsequently assigned Incident Number NVV2002831233. An updated NMOCD Form C-141 is included as Attachment 1.

SITE CHARACTERIZATION

LTE characterized the Site according to Table 1, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Depth to groundwater at the site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest water well data. The closest permitted groundwater well with depth to water data is United States Geological Survey (USGS) 320125103514701, located

approximately 5,975 feet northeast of the Site. USGS well 320125103514701 has a recorded depth to groundwater of 117 feet bgs. The closest significant watercourse to the Site is an unnamed intermittent stream located approximately 360 feet west of the Site. The Site is greater than 300 feet from any occupied residence, school, hospital, institution, church, or wetland and greater than 1,000 feet to a freshwater well or spring. The Site is not within a 100-year floodplain, overlying a subsurface mine or overlying an unstable area. The Site is located in a medium-potential karst area. Potential receptors identified during site characterization are displayed in Figure 1.

CLOSURE CRITERIA

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

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

SITE ASSESSMENT AND PRELIMINARY CORRECTIVE ACTION

On January 13, 2020, LTE personnel conducted Site investigative activities to evaluate the subject release. The release extent was mapped using a handheld Global Positioning System (GPS) unit and is shown on Figure 2. Photographic documentation of the Site following preliminary assessment activities is included in Attachment 2.

On January 15, 2020, LTE personnel returned to the Site to oversee the excavation for the replacement of the failed subject subsurface line. Additionally, visually stained soil was excavated from the surrounding impacted areas and staged onsite. It was determined that the trench would be left open for continued sampling and excavation activities.

DELINEATION SOIL SAMPLING

On February 11, 2020, LTE personnel conducted Site delineation activities. Utilizing heavy equipment, three potholes (samples labeled as “PH”) were advanced within the release footprint and open excavation to verify the presence or absence of soil impacts. The locations of delineation potholes are depicted on Figure 2. Field screening was conducted, at minimum, every 1-foot interval for chloride using Hach® chloride QuanTab® test strips. Due to the potential of

detecting inaccurate readings attributable to excessive moisture content in the soil from cold climate conditions, volatile hydrocarbons were not screened utilizing a calibrated photoionization detector (PID). Soil sample depths ranged from a total depth of 10 feet bgs to 12 feet bgs. Field screening results and observations for each pothole were logged on lithologic/soil sampling logs, which are included in Attachment 3. Two soil samples were collected from each soil boring: the most impacted depth based on field screening results and the terminus of the pothole. The soil samples were each 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-gasoline range organics (GRO), TPH-diesel range organics (DRO), and TPH-motor oil range organics (MRO) following USEPA Method 8015M/D; and chloride following USEPA Method 300.0. Photographic documentation of delineation events is also included in Attachment 2.

INITIAL EXCAVATION SOIL SAMPLING

On February 24, 2020, LTE personnel returned to the Site to field screen and collect final confirmation soil samples from the current extent of the excavation. The excavation area and soil sample locations are depicted on Figure 3. Field screening was conducted to confirm the presence or absence of volatile aromatic hydrocarbons and chloride by methods previously described. Following completion of field screening activities, 5-point composite confirmation soil samples were collected from the floor (samples labeled as “FS”) and sidewalls (samples labeled as “SW”) of the excavation area. Each soil sample represented at most 200 square feet. Soil samples were collected, handled and analyzed as previously described. Photographic documentation of excavation sampling events is also included in Attachment 2.

Laboratory analytical results of initial excavation confirmation samples indicated additional remediation of soil impacts were warranted.

CONTINUED EXCAVATION SOIL SAMPLING

On February 28, 2020 and March 10, 2020, LTE personnel was onsite to oversee continued excavation activities associated with the remaining impacted areas and hydrocarbon exceedances associated with soil sample FS12 at 2 feet bgs. Heavy equipment and hand shoveling were utilized to address removal of impacted soils. Excavation activities were directed by field screening soil samples for volatile aromatic hydrocarbons and chloride by methods previously described. It was determined that approximately 100 square feet of the surface area associated with soil sample FS12 at 2 feet bgs yielded hydrocarbon field screenings above the Closure Criteria. As a result, the depth of the aforementioned area increased up to 3 feet bgs in a localized section beneath the exposed subsurface flowline. Following completion of continued excavation activities, 5-point composite confirmation soil samples were collected from the floors and

sidewalls of the excavation area. Each soil sample represented at most 200 square feet. Soil samples were collected, handled, and analyzed as previously described. The current excavation area and additional soil sample locations are depicted on Figure 3. Photographic documentation of continued excavation events is also included in Attachment 2.

During the duration of remediation activities, approximately 180 cubic yards of impacted soil were removed from the excavation area and transported to the R360 Red Bluff Facility in Orla, Texas for disposal under WPX approved manifests. The excavation areas measured a total of approximately 3,870 square feet in area and ranged in depth from 0.3 feet bgs to 6 feet bgs.

ANALYTICAL RESULTS

Remediation in the area associated with soil sample FS12 at 2 feet bgs was confirmed via laboratory analytical results of soil sample FS12A at 2 to 3 feet bgs. Laboratory analytical results of all final excavation confirmation and delineation soil samples indicate compliance with the Closure Criteria. Analytical results from all sampling activities are summarized in Table 1 and the complete laboratory analytical reports are included as Attachment 4.

CONCLUSIONS

WPX is requesting no further action of Incident ID NVV2002831233. Upon approval of this closure request, WPX will backfill the excavation with material purchased locally and recontour the Site to match pre-existing site conditions.

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

Sincerely,

LT ENVIRONMENTAL, INC.

Joseph S. Hernandez
Project Geologist

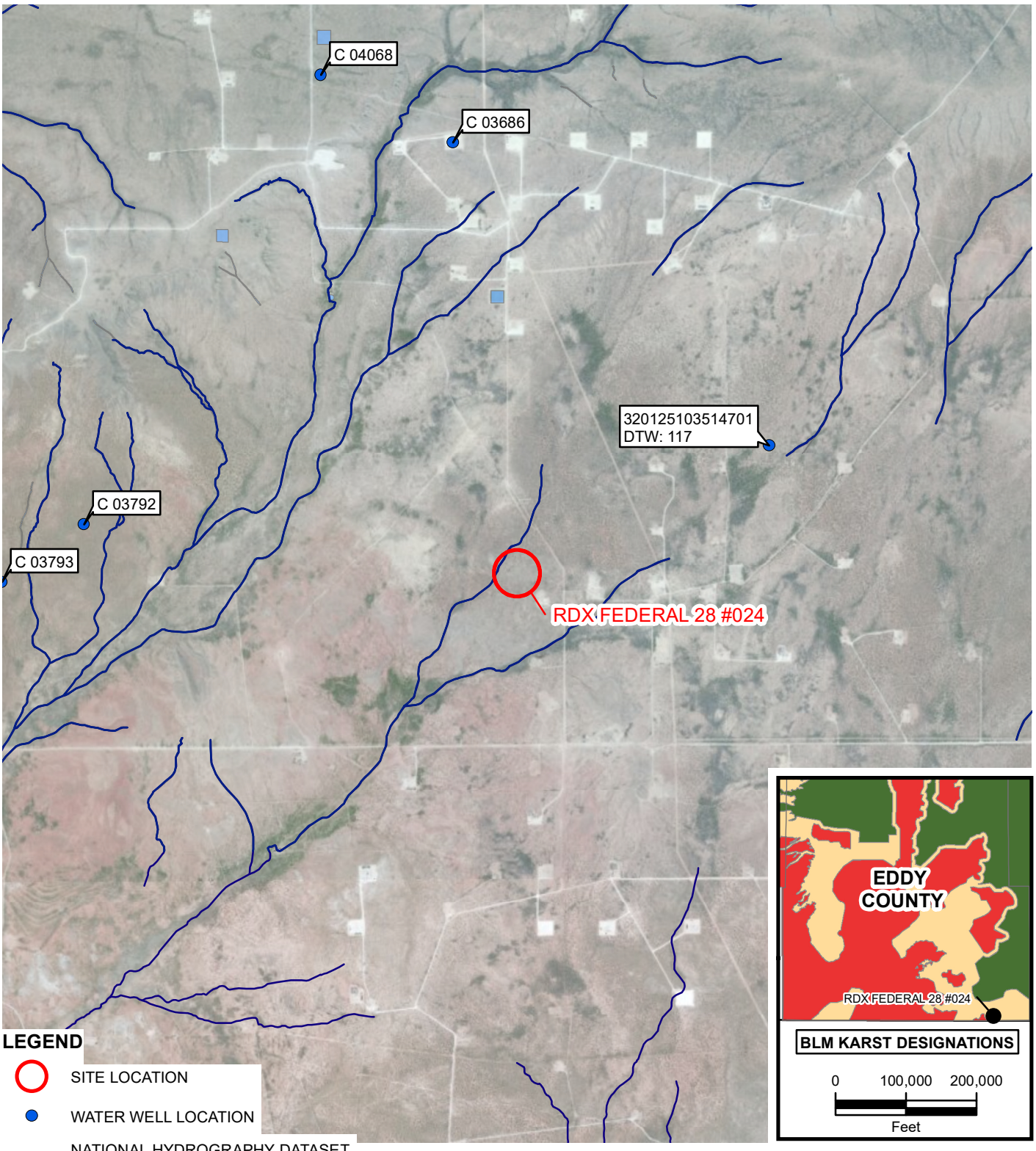
Ashley L. Ager, M.S., P.G.
Senior Geologist

cc: Jim Raley, WPX
Robert Hamlet, NMOCD
Victoria Venegas, NMOCD
Bureau of Land Management

Attachments:

Figure 1	Site Location Map
Figure 2	Delineation Soil Sample Locations
Figure 3	Excavation Soil Sample Locations
Table 1	Soil Analytical Results
Attachment 1	Form C-141
Attachment 2	Photographic Log
Attachment 3	Lithologic/Soil Sampling Logs
Attachment 4	Laboratory Analytical Reports

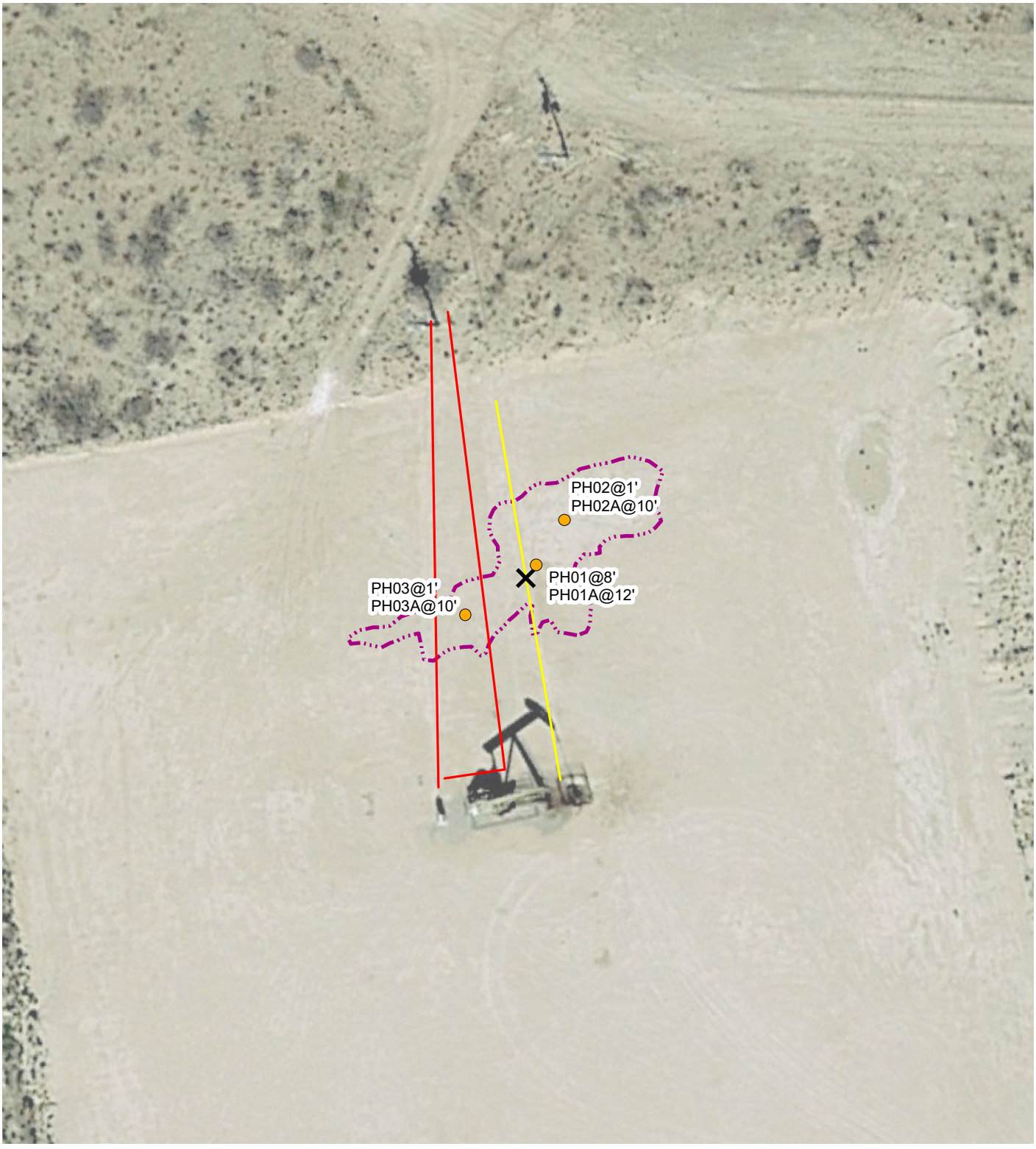
FIGURES



NOTE: REMEDIATION PERMIT NUMBER NOT ASSIGNED
DTW: DEPTH TO WATER IN FEET
BLM: BUREAU OF LAND MANAGEMENT

FIGURE 1
SITE LOCATION MAP
RDX FEDERAL 28 #024
UNIT H SEC 28 T26S R30E
EDDY COUNTY, NEW MEXICO
WPX ENERGY PERMIAN, LLC.

P:\WPX\GIS\MXD\034820003_RDX_FEDERAL 28-24\034820003_FIG01_SL_RECEPTOR_2020.mxd



LEGEND

- RELEASE LOCATION
- DELINEATION SOIL SAMPLE
- ELECTRIC LINE
- GAS/PIPELINE
- RELEASE EXTENT (2,987.16 SQUARE FEET)

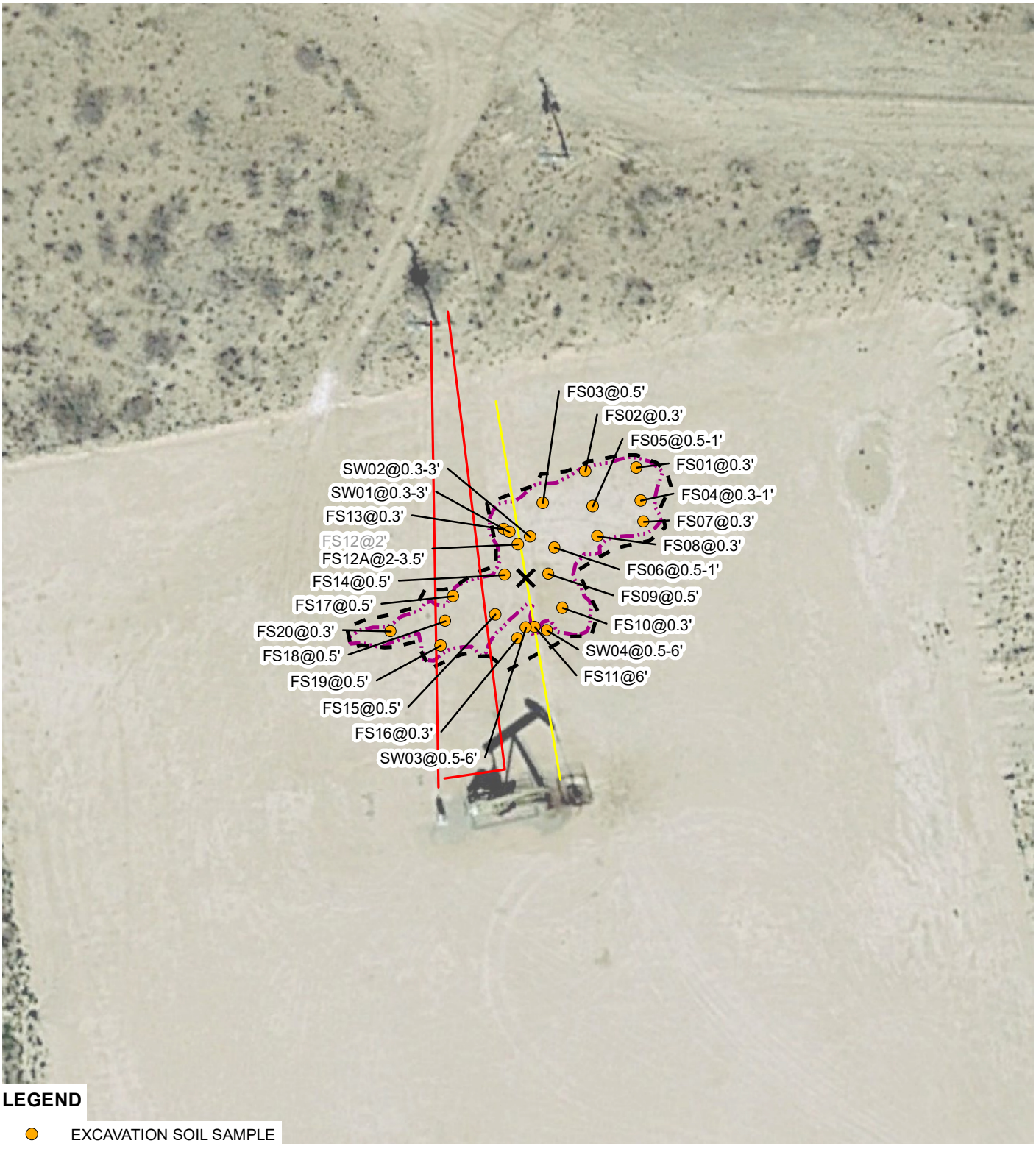
IMAGE COURTESY OF GOOGLE EARTH 2019

0 50 100
Feet

N

FIGURE 2
DELINEATION SOIL SAMPLE LOCATIONS
RDX FEDERAL 28 #024
UNIT H SEC 28 T26S R30E
EDDY COUNTY, NEW MEXICO
WPX ENERGY PERMIAN, LLC.

P:\WPX\GIS\MXD\034820003_RDX_FEDERAL 28-24\034820003_FIG02_DELINEATION_2020.mxd



LEGEND

- EXCAVATION SOIL SAMPLE
- RELEASE LOCATION
- ELECTRIC LINE
- GAS/PIPELINE
- RELEASE EXTENT (2,987.16 SQUARE FEET)
- EXCAVATION EXTENT

TEXT: INDICATES SOIL REPRESENTED BY SAMPLE THAT WAS REMOVED

IMAGE COURTESY OF GOOGLE EARTH 2019

0 50 100
Feet

N

FIGURE 3
EXCAVATION SOIL SAMPLE LOCATIONS
RDX FEDERAL 28 #024
UNIT H SEC 28 T26S R30E
EDDY COUNTY, NEW MEXICO
WPX ENERGY PERMIAN, LLC.

P:\WPX\GIS\MXD\034820003_RDX_FEDERAL 28-24\034820003_FIG03_EXCAVATION_2020.mxd

TABLE

TABLE 1
SOIL ANALYTICAL RESULTS

RDX FEDERAL 28 #024
INCIDENT ID NVV2002831233
EDDY COUNTY, NEW MEXICO
WPX ENERGY PERMIAN, LLC.

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)	Application
NMOCD Table 1 Closure Criteria			**10**	NE	NE	NE	**50**	NE	NE	NE	**1,000**	**2,500**	**20,000**	
PH01	8	02/11/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	16,500	In-situ
PH01A	12	02/11/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	164	In-situ
PH02	1	02/11/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	9,850	In-situ
PH02A	10	02/11/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.2	<50.2	<50.2	<50.2	<50.2	340	In-situ
PH03	1	02/11/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	7,920	In-situ
PH03A	10	02/11/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	634	In-situ
FS01	0.3	02/24/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.0	<50.0	<50.0	<50.0	<50.0	9,720	In-situ
FS02	0.3	02/24/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	52.6	<50.0	52.6	52.6	10,300	In-situ
FS03	0.5	02/24/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<49.9	<49.9	<49.9	<49.9	<49.9	6,990	In-situ
FS04	0.3 - 1	02/28/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	5,210	In-situ
FS05	0.5 - 1	02/28/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<49.8	<49.8	<49.8	<49.8	<49.8	5,150	In-situ
FS06	0.5 - 1	02/28/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	10,300	In-situ
FS07	0.3	02/24/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	8,590	In-situ
FS08	0.3	02/24/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	8,860	In-situ
FS09	0.5	02/24/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.9	308	<49.9	308	308	12,800	In-situ
FS10	0.3	02/24/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	75.0	<50.0	75.0	75.0	15,200	In-situ
FS11	6	02/24/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<49.8	270	<49.8	270	270	11,900	In-situ
FS12	2	02/24/2020	<0.00199	<0.00199	0.00524	0.0316	0.0368	70.3	1,220	141	**1,290**	1,431	13,000	Excavated
FS12A	2 - 3.5	03/13/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	5,090	In-situ
FS13	0.3	02/24/2020	<0.00202	<0.00202	0.0144	<0.00202	0.0144	<49.9	<49.9	<49.9	<49.9	<49.9	8,290	In-situ
FS14	0.5	02/24/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.8	822	94.0	822	916	12,500	In-situ

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TABLE 1
SOIL ANALYTICAL RESULTS

RDX FEDERAL 28 #024
INCIDENT ID NVV2002831233
EDDY COUNTY, NEW MEXICO
WPX ENERGY PERMIAN, LLC.

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)	Application
NMOCD Table 1 Closure Criteria			**10**	NE	NE	NE	**50**	NE	NE	NE	**1,000**	**2,500**	**20,000**	
FS15	0.5	02/24/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	207	<50.0	207	207	18,300	In-situ
FS16	0.3	02/24/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.0	846	112	846	958	12,800	In-situ
FS17	0.5	02/24/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<49.9	<49.9	<49.9	<49.9	<49.9	7,310	In-situ
FS18	0.5	02/24/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.0	<50.0	<50.0	<50.0	<50.0	18,000	In-situ
FS19	0.5	02/24/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.0	<50.0	<50.0	<50.0	<50.0	11,600	In-situ
FS20	0.3	02/24/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<49.9	<49.9	<49.9	<49.9	<49.9	13,300	In-situ
SW01	0.3 - 3	02/28/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	3,690	In-situ
SW02	0.3 - 3	02/28/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.0	<50.0	<50.0	<50.0	<50.0	3,330	In-situ
SW03	0.5 - 6	02/24/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	10,300	In-situ
SW04	0.5 - 6	02/24/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	13,300	In-situ

Notes:

bgs - below ground surface
BTEX - benzene, toluene, ethylbenzene, and total xylenes
DRO - diesel range organics
GRO - gasoline range organics
mg/kg - milligrams per kilogram
MRO - motor oil range organics
NMAC - New Mexico Administrative Code
NMOCD - New Mexico Oil Conservation Division
NE - not established
TPH - total petroleum hydrocarbons
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

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ATTACHMENT 1: FORM C-141

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	NVV2002831233
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: WPX Energy Permian, LLC.	OGRID: 246289
Contact Name: Jim Raley	Contact Telephone: 575-689-7597
Contact email: james.raley@wpxenergy.com	Incident # *(assigned by OCD)*
Contact mailing address: 5315 Buena Vista Dr., Carlsbad, NM 88220	

Location of Release Source

Latitude 32.01613 Longitude -103.88090

(NAD 83 in decimal degrees to 5 decimal places)

Site Name: RDX FEDERAL 28 #024	Site Type: Production Facility
Date Release Discovered: 1/12/2020	API# *(if applicable): 30-015-43038*

Unit Letter	Section	Township	Range	County
H	28	26S	30E	Eddy

Surface Owner: ☐ State ☒ Federal ☐ Tribal ☐ Private

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)13	Volume Recovered (bbls)10
☒ Produced Water	Volume Released (bbls) 20	Volume Recovered (bbls) 10
	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: Flowline failure resulted in approx. 33 bbls of fluids impacting pad surface.

$$bbl\ estimate = \frac{saturated\ soil\ volume\ (ft^3)}{4.21(\frac{ft^3}{bbl\ equivalent})} * estimated\ soil\ porosity(\%) + \text{recovered fluids (bbl)}$$

State of New Mexico
Oil Conservation Division

Incident ID	NVV2002831233
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? Volume exceeded 25 bbls.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Phone call to Mike Bratcher on 1/13/2019 at 8:49 AM	

Initial Response

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

☒ The source of the release has been stopped.

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

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

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

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

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

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

Printed Name: Jim Raley

Title: Environmental Specialist

Signature: Jim Raley

Date: 1/15/2020

email: james.raley@wpxenergy.com

Telephone: 575-689-7597

OCD Only

Received by: Victoria Venegas

Date: 01/28/2020

State of New Mexico
Oil Conservation Division

Incident ID	NVV2002831233
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	>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.

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Page 4

State of New Mexico
Oil Conservation Division

Incident ID	NVV2002831233
District RP	
Facility ID	
Application ID	

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

Printed Name: Jim Raley Title: Environmental Specialist

Signature: Jim Raley Date: 5-28-2020

email: james.raley@wpxenergy.com Telephone: 575-689-7597

OCD Only

Received by: Date:

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State of New Mexico
Oil Conservation Division

Incident ID	NVV2002831233
District RP	
Facility ID	
Application ID	

Closure

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

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

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

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

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

☒ Description of remediation activities

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

Printed Name: Jim Raley Title: Environmental Specialist

Signature: Jim Raley Date: 5-28-2020

email: james.raley@wpxenergy.com Telephone: 575-689-7597

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: _____

ATTACHMENT 2: PHOTOGRAPHIC LOG

PHOTOGRAPHIC LOG

Photograph 1: North view of the subject release.

Photograph 2: West view of the subject release.

Photograph 3: South view of the subject release and flowline.

PHOTOGRAPHIC LOG

Photograph 4: North view of associated excavation after flowline replacement.

Photograph 5: South view of associated excavation after flowline replacement.

Photograph 6: Southwest view of the associated excavation after flowline replacement.

PHOTOGRAPHIC LOG

Photograph 7: Southwest view of the Site following additional excavation activities.

Photograph 8: South view of the Site following additional excavation activities.

Photograph 9: North view of the Site following additional excavation activities.

PHOTOGRAPHIC LOG

Photograph 10: West view of the final excavation extent.

Photograph 11: South view of the final excavation extent.

Photograph 12 : North view of the final excavation extent.

ATTACHMENT 3: LITHOLOGIC/SOIL SAMPLING LOGS

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
A proud member of WSP
Compliance · Engineering · Remediation

BH or PH Name: PH01		Date: 2/11/2020
Site Name: RDX 28-24		
RP or Incident Number: NVV2002831233		
LTE Job Number: 34820003		
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: AB	Method: Back Hoe
Lat/Long: 32.0161 -103.8809	Field Screening: HACH Chloride Strips	Hole Diameter: 2' / Total Depth: 12'

Comments: Collected from open excavation (depth ranging 6-7 ft below ground surface)

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0		EXCAVATED
						1		
						2		
						3		
						4		
						5		
						6		
						7		EXCAVATED
M	13,428	-	No		8'	8	SW-SC	Light pink - brown, mod plastic, clayey sand (f.-c.), well graded, no odor, gypsum/selenite crystals
M	9,484	-	No		9'	9	SW-SC	Light pink - brown, mod plastic, clayey sand (f.-c.), well graded, no odor, gypsum/selenite crystals
M	9,616	-	No		10'	10	SW-SC	Light pink - brown, mod plastic, clayey sand (f.-c.), well graded, no odor, gypsum/selenite crystals
M	5,420	-	No		11'	11	SW-SC	Light pink - brown, mod plastic, clayey sand (f.-c.), well graded, no odor, gypsum/selenite crystals
D	168	-	No		12'	12	SW-SM	Light brown - pink, well graded, silt, sand, no odor

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

A proud member of WSP

BH or PH Name: PH02		Date: 2/11/2020	
Site Name: RDX 28-24			
RP or Incident Number: NVV2002831233			
LTE Job Number: 34820003			
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: AB	Method:	Back Hoe
Lat/Long: 32.0161 -103.8809	Field Screening: HACH Chloride Strips	Hole Diameter: 2'	Total Depth: 10'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0		
M	8,740	-	No		1'	1	SW-SC	Light pink - brown, mod plastic, clayey sand (f.-c.), well graded, no odor, gypsum/selenite crystals
M	780	-	No		2'	2	SW-SC	Light pink - brown, mod plastic, clayey sand (f.-c.), well graded, no odor, gypsum/selenite crystals
D	196	-	No		3'	3	SW-SC	Light pink - brown, mod plastic, clayey sand (f.-c.), well graded, no odor, gypsum/selenite crystals
D	280	-	No		4'	4	SW-SC	Light pink - brown, mod plastic, clayey sand (f.-c.), well graded, no odor, gypsum/selenite crystals
						5		
D	220	-	No		6'	6	SW-SC	Light pink - brown, mod plastic, clayey sand (f.-c.), well graded, no odor, gypsum/selenite crystals
						7		
D	148	-	No		8'	8	SW-SC	Light pink - brown, mod plastic, clayey sand (f.-c.), well graded, no odor, gypsum/selenite crystals
						9		
D	220	-	No		10'	10	SW-SC	Light pink - brown, mod plastic, clayey sand (f.-c.), well graded, no odor, gypsum/selenite crystals
						11		Total Depth
						12		

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

A proud member of WSP

BH or PH Name: PH03		Date: 2/11/2020	
Site Name: RDX 28-24			
RP or Incident Number: NVV2002831233			
LTE Job Number: 34820003			
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: AB	Method:	Back Hoe
Lat/Long: 32.0161 -103.8809	Field Screening: HACH Chloride Strips	Hole Diameter: 2'	Total Depth: 10'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0		
M	8,060	-	No		1'	1	SW-SC	Light pink - brown, mod plastic, clayey sand (f.-c.), well graded, no odor, gypsum/selenite crystals
M	848	-	No		2'	2	SW-SC	Light pink - brown, mod plastic, clayey sand (f.-c.), well graded, no odor, gypsum/selenite crystals
M	504	-	No		3'	3	SW-SC	Light pink - brown, mod plastic, clayey sand (f.-c.), well graded, no odor, gypsum/selenite crystals
D	BDL	-	No		4'	4	SW-SC	Light pink - brown, mod plastic, clayey sand (f.-c.), well graded, no odor, gypsum/selenite crystals
						5		
D	BDL	-	No		6'	6	SW-SC	Light pink - brown, mod plastic, clayey sand (f.-c.), well graded, no odor, gypsum/selenite crystals
						7		
D	BDL	-	No		8'	8	SW-SC	Light pink - brown, mod plastic, clayey sand (f.-c.), well graded, no odor, gypsum/selenite crystals
						9		
D	528	-	No		10'	10	SW-SC	Light pink - brown, mod plastic, clayey sand (f.-c.), well graded, no odor, gypsum/selenite crystals
						11		Total Depth
						12		

ATTACHMENT 4: LABORATORY ANALYTICAL REPORTS

Analytical Report 652201

for

LT Environmental, Inc.

Project Manager: Chris McKisson

RDX 28-24

034820003

14-FEB-20

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

14-FEB-20

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

Reference: XENCO Report No(s): **652201**
RDX 28-24
Project Address: Rural Eddy County

Chris McKisson:

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) 652201. 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. 652201 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 652201

LT Environmental, Inc., Arvada, CO

RDX 28-24

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH01	S	02-11-20 10:25	8 ft	652201-001
PH02	S	02-11-20 11:55	1 ft	652201-002
PH03	S	02-11-20 12:35	1 ft	652201-003

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: RDX 28-24

Project ID: *034820003*
Work Order Number(s): *652201*

Report Date: *14-FEB-20*
Date Received: *02/12/2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3116351 BTEX by EPA 8021B

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

Certificate of Analysis Summary 652201

LT Environmental, Inc., Arvada, CO

Project Name: RDX 28-24

Project Id: 034820003
Contact: Chris McKisson
Project Location: Rural Eddy County

Date Received in Lab: Wed Feb-12-20 02:45 pm
Report Date: 14-FEB-20
Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	652201-001		652201-002		652201-003					
	Field Id:	PH01		PH02		PH03					
	Depth:	8- ft		1- ft		1- ft					
	Matrix:	SOIL		SOIL		SOIL					
	Sampled:	Feb-11-20 10:25		Feb-11-20 11:55		Feb-11-20 12:35					
BTEX by EPA 8021B	***Extracted:***	Feb-12-20 16:00		Feb-12-20 16:00		Feb-12-20 16:00					
	Analyzed:	Feb-12-20 19:29		Feb-12-20 19:50		Feb-12-20 20:10					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200				
Toluene		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200				
Ethylbenzene		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200				
m,p-Xylenes		<0.00398	0.00398	<0.00399	0.00399	<0.00399	0.00399				
o-Xylene		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200				
Xylenes, Total		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200				
Total BTEX		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200				
Chloride by EPA 300	***Extracted:***	Feb-13-20 07:00		Feb-13-20 07:00		Feb-13-20 07:00					
	Analyzed:	Feb-13-20 09:41		Feb-13-20 09:57		Feb-13-20 10:03					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		16500	498	9850	500	7920	499				
TPH by SW8015 Mod	***Extracted:***	Feb-12-20 16:20		Feb-12-20 16:20		Feb-12-20 16:20					
	Analyzed:	Feb-12-20 16:29		Feb-12-20 16:29		Feb-12-20 16:48					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0	<50.2	50.2	<49.8	49.8				
Diesel Range Organics (DRO)		<50.0	50.0	<50.2	50.2	<49.8	49.8				
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<50.2	50.2	<49.8	49.8				
Total GRO-DRO		<50.0	50.0	<50.2	50.2	<49.8	49.8				
Total TPH		<50.0	50.0	<50.2	50.2	<49.8	49.8				

Jessica Kramer
Project Assistant

Certificate of Analytical Results 652201

LT Environmental, Inc., Arvada, CO

RDX 28-24

Sample Id:	**PH01**	Matrix:	Soil	Date Received:	02.12.20 14.45
Lab Sample Id:	652201-001	Date Collected:	02.11.20 10.25	Sample Depth:	8 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.13.20 07.00	Basis:	Wet Weight
Seq Number:	3116392				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**16500**	498	mg/kg	02.13.20 09.41		50

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	02.12.20 16.20	Basis:	Wet Weight
Seq Number:	3116314				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	02.12.20 16.29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	02.12.20 16.29	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	02.12.20 16.29	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	02.12.20 16.29	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	02.12.20 16.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	02.12.20 16.29	
o-Terphenyl	84-15-1	108	%	70-135	02.12.20 16.29	

Certificate of Analytical Results 652201

LT Environmental, Inc., Arvada, CO

RDX 28-24

Sample Id:	**PH01**	Matrix:	Soil	Date Received:	02.12.20 14.45
Lab Sample Id:	652201-001	Date Collected:	02.11.20 10.25	Sample Depth:	8 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.12.20 16.00	Basis:	Wet Weight
Seq Number:	3116351				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	02.12.20 19.29	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	02.12.20 19.29	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	02.12.20 19.29	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	02.12.20 19.29	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	02.12.20 19.29	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	02.12.20 19.29	U	1
Total BTEX		<0.00199	0.00199	mg/kg	02.12.20 19.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	89	%	70-130	02.12.20 19.29	
4-Bromofluorobenzene	460-00-4	102	%	70-130	02.12.20 19.29	

Certificate of Analytical Results 652201

LT Environmental, Inc., Arvada, CO

RDX 28-24

Sample Id:	**PH02**	Matrix:	Soil	Date Received:	02.12.20 14.45
Lab Sample Id:	652201-002	Date Collected:	02.11.20 11.55	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.13.20 07.00	Basis:	Wet Weight
Seq Number:	3116392				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**9850**	500	mg/kg	02.13.20 09.57		50

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	02.12.20 16.20	Basis:	Wet Weight
Seq Number:	3116314				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	02.12.20 16.29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	02.12.20 16.29	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	02.12.20 16.29	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	02.12.20 16.29	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	02.12.20 16.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	02.12.20 16.29	
o-Terphenyl	84-15-1	99	%	70-135	02.12.20 16.29	

Certificate of Analytical Results 652201

LT Environmental, Inc., Arvada, CO

RDX 28-24

Sample Id:	**PH02**	Matrix:	Soil	Date Received:	02.12.20 14.45
Lab Sample Id:	652201-002	Date Collected:	02.11.20 11.55	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.12.20 16.00	Basis:	Wet Weight
Seq Number:	3116351				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.12.20 19.50	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.12.20 19.50	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.12.20 19.50	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	02.12.20 19.50	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.12.20 19.50	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	02.12.20 19.50	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.12.20 19.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	94	%	70-130	02.12.20 19.50	
1,4-Difluorobenzene	540-36-3	94	%	70-130	02.12.20 19.50	

Certificate of Analytical Results 652201

LT Environmental, Inc., Arvada, CO

RDX 28-24

Sample Id:	**PH03**	Matrix:	Soil	Date Received:	02.12.20 14.45
Lab Sample Id:	652201-003	Date Collected:	02.11.20 12.35	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.13.20 07.00	Basis:	Wet Weight
Seq Number:	3116392				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**7920**	499	mg/kg	02.13.20 10.03		50

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	02.12.20 16.20	Basis:	Wet Weight
Seq Number:	3116314				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	02.12.20 16.48	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	02.12.20 16.48	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	02.12.20 16.48	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	02.12.20 16.48	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	02.12.20 16.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	02.12.20 16.48	
o-Terphenyl	84-15-1	100	%	70-135	02.12.20 16.48	

Certificate of Analytical Results 652201

LT Environmental, Inc., Arvada, CO

RDX 28-24

Sample Id:	**PH03**	Matrix:	Soil	Date Received:	02.12.20 14.45
Lab Sample Id:	652201-003	Date Collected:	02.11.20 12.35	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.12.20 16.00	Basis:	Wet Weight
Seq Number:	3116351				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.12.20 20.10	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.12.20 20.10	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.12.20 20.10	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	02.12.20 20.10	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.12.20 20.10	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	02.12.20 20.10	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.12.20 20.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	94	%	70-130	02.12.20 20.10	
1,4-Difluorobenzene	540-36-3	110	%	70-130	02.12.20 20.10	

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 652201

LT Environmental, Inc.

RDX 28-24

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3116392 — Matrix: Solid — Date Prep: 02.13.20
MB Sample Id: 7696548-1-BLK — LCS Sample Id: 7696548-1-BKS — LCSD Sample Id: 7696548-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	254	102	255	102	90-110	0	20	mg/kg	02.13.20 09:30	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3116392 — Matrix: Soil — Date Prep: 02.13.20
Parent Sample Id: 652201-001 — MS Sample Id: 652201-001 S — MSD Sample Id: 652201-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	16500	201	16700	100	16700	100	90-110	0	20	mg/kg	02.13.20 09:46	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3116392 — Matrix: Soil — Date Prep: 02.13.20
Parent Sample Id: 652220-005 — MS Sample Id: 652220-005 S — MSD Sample Id: 652220-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	8.75	198	216	105	211	102	90-110	2	20	mg/kg	02.13.20 11:03	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3116314 — Matrix: Solid — Date Prep: 02.12.20
MB Sample Id: 7696489-1-BLK — LCS Sample Id: 7696489-1-BKS — LCSD Sample Id: 7696489-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	795	80	834	83	70-135	5	35	mg/kg	02.12.20 11:36	
Diesel Range Organics (DRO)	<50.0	1000	707	71	747	75	70-135	6	35	mg/kg	02.12.20 11:36	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	132		117		112		70-135	%	02.12.20 11:36
o-Terphenyl	130		100		100		70-135	%	02.12.20 11:36

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3116314 — Matrix: Solid — Date Prep: 02.12.20
MB Sample Id: 7696489-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	02.12.20 11:16	

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 652201

LT Environmental, Inc.

RDX 28-24

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3116314 — Matrix: Soil — Date Prep: 02.12.20
Parent Sample Id: 652094-001 — MS Sample Id: 652094-001 S — MSD Sample Id: 652094-001 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)	<50.2	1000	883	88	932	93	70-135	5	35	mg/kg	02.12.20 11:56	
Diesel Range Organics (DRO)	<50.2	1000	967	97	1020	102	70-135	5	35	mg/kg	02.12.20 11:56	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	106		112		70-135	%	02.12.20 11:56
o-Terphenyl	101		108		70-135	%	02.12.20 11:56

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3116351 — Matrix: Solid — Date Prep: 02.12.20
MB Sample Id: 7696486-1-BLK — LCS Sample Id: 7696486-1-BKS — LCSD Sample Id: 7696486-1-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	0.118	118	0.125	125	70-130	6	35	mg/kg	02.12.20 12:21	
Toluene	<0.00200	0.100	0.110	110	0.116	116	70-130	5	35	mg/kg	02.12.20 12:21	
Ethylbenzene	<0.00200	0.100	0.106	106	0.112	112	71-129	6	35	mg/kg	02.12.20 12:21	
m,p-Xylenes	<0.00400	0.200	0.209	105	0.220	110	70-135	5	35	mg/kg	02.12.20 12:21	
o-Xylene	<0.00200	0.100	0.104	104	0.110	110	71-133	6	35	mg/kg	02.12.20 12:21	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	110		108		108		70-130	%	02.12.20 12:21
4-Bromofluorobenzene	96		93		94		70-130	%	02.12.20 12:21

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3116351 — Matrix: Soil — Date Prep: 02.12.20
Parent Sample Id: 652094-001 — MS Sample Id: 652094-001 S — MSD Sample Id: 652094-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.106	106	0.125	125	70-130	16	35	mg/kg	02.12.20 13:02	
Toluene	<0.00199	0.0996	0.111	111	0.116	116	70-130	4	35	mg/kg	02.12.20 13:02	
Ethylbenzene	<0.00199	0.0996	0.108	108	0.112	112	71-129	4	35	mg/kg	02.12.20 13:02	
m,p-Xylenes	<0.00398	0.199	0.190	95	0.219	110	70-135	14	35	mg/kg	02.12.20 13:02	
o-Xylene	<0.00199	0.0996	0.102	102	0.110	110	71-133	8	35	mg/kg	02.12.20 13:02	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		107		70-130	%	02.12.20 13:02
4-Bromofluorobenzene	95		94		70-130	%	02.12.20 13:02

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

Work Order No: 6052201

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 Craslbad, NM (432) 704-5440
Phoenix,AZ (480) 355-0900 Atlanta,GA (770) 449-8800 Tampa,FL (813) 620-2000 West Palm Beach, FL (561) 689-6701
www.xenco.com

Project Manager:	Chris McKisson	Bill To: (if different)	
Company Name:	LT Environmental	Company Name:	
Address:	820 Megan Ave, Unit B	Address:	
City, State ZIP:	Rifle, CO 81650	City, State ZIP:	
Phone:	(970)285-9985	Email:	cmckisson@ltenv.com, abyers@ltenv.com

Work Order Comments

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

Project Name:	RDX 28-24	Turn Around	
Project Number:	034820003	Routine ☐	
Project Location	Rural Eddy County	Rush: 3 DAY	
Sampler's Name:	Anna Byers	Due Date:	
PO #:		Quote #:	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	1.4	Thermometer ID	T-NM-007
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Total Containers:	3

Preservative Codes

MeOH: Me
None: NO
HNO3: HN
H2S04: H2
HCL: HL
NaOH: Na
Zn Acetate+ NaOH: Zn

TAT starts the day recevied by the lab, if received by 4:00pm

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)	Sample Comments
	PH01	S	2/11/20	1025	8'	1	X	X	X	
	PH02	S	2/11/20	1155	1'	1	X	X	X	
	PH03	S	2/11/20	1235	1'	1	X	X	X	

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr 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
Anna Byers		2/12/20 14:45	2		
			4		
			6		

Revised Date 022619 Rev. 2019.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 02.12.2020 02.45.00 PM

Work Order #: 652201

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

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1.4
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**
#5 Custody Seals intact on sample bottles?	**Yes**
#6*Custody Seals Signed and dated?	**Yes**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**No**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 02.12.2020

Checklist reviewed by: Jessica Kramer Date: 02.13.2020

Jessica Kramer

Analytical Report 652202

for

LT Environmental, Inc.

Project Manager: Chris McKisson

RDX 28-24

034842003

14-FEB-20

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

14-FEB-20

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

Reference: XENCO Report No(s): **652202**
RDX 28-24
Project Address: Rural Eddy County

Chris McKisson:

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) 652202. 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. 652202 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 652202

LT Environmental, Inc., Arvada, CO

RDX 28-24

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH01A	S	02-11-20 11:10	12 ft	652202-001
PH02A	S	02-11-20 12:25	10 ft	652202-002
PH03A	S	02-11-20 13:00	10 ft	652202-003

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: RDX 28-24

Project ID: *034842003*
Work Order Number(s): *652202*

Report Date: *14-FEB-20*
Date Received: *02/12/2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3116351 BTEX by EPA 8021B

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

Certificate of Analysis Summary 652202

LT Environmental, Inc., Arvada, CO

Project Name: RDX 28-24

Project Id: 034842003
Contact: Chris McKisson
Project Location: Rural Eddy County

Date Received in Lab: Wed Feb-12-20 02:49 pm
Report Date: 14-FEB-20
Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	652202-001		652202-002		652202-003					
	Field Id:	PH01A		PH02A		PH03A					
	Depth:	12- ft		10- ft		10- ft					
	Matrix:	SOIL		SOIL		SOIL					
	Sampled:	Feb-11-20 11:10		Feb-11-20 12:25		Feb-11-20 13:00					
BTEX by EPA 8021B	***Extracted:***	Feb-12-20 16:00		Feb-12-20 16:00		Feb-12-20 16:00					
	Analyzed:	Feb-12-20 20:30		Feb-12-20 20:51		Feb-12-20 21:11					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200				
Toluene		<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200				
Ethylbenzene		<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200				
m,p-Xylenes		<0.00399	0.00399	<0.00402	0.00402	<0.00399	0.00399				
o-Xylene		<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200				
Xylenes, Total		<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200				
Total BTEX		<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200				
Chloride by EPA 300	***Extracted:***	Feb-13-20 07:00		Feb-13-20 07:00		Feb-13-20 07:00					
	Analyzed:	Feb-13-20 10:08		Feb-13-20 10:14		Feb-13-20 10:30					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		164	49.9	340	50.1	634	49.9				
TPH by SW8015 Mod	***Extracted:***	Feb-12-20 16:20		Feb-12-20 16:20		Feb-12-20 16:30					
	Analyzed:	Feb-12-20 16:48		Feb-12-20 17:08		Feb-12-20 17:48					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<49.9	49.9	<50.2	50.2	<50.0	50.0				
Diesel Range Organics (DRO)		<49.9	49.9	<50.2	50.2	<50.0	50.0				
Motor Oil Range Hydrocarbons (MRO)		<49.9	49.9	<50.2	50.2	<50.0	50.0				
Total GRO-DRO		<49.9	49.9	<50.2	50.2	<50.0	50.0				
Total TPH		<49.9	49.9	<50.2	50.2	<50.0	50.0				

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

Jessica Kramer
Project Assistant

Certificate of Analytical Results 652202

LT Environmental, Inc., Arvada, CO

RDX 28-24

Sample Id:	**PH01A**	Matrix:	Soil	Date Received:	02.12.20 14.49
Lab Sample Id:	652202-001	Date Collected:	02.11.20 11.10	Sample Depth:	12 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.13.20 07.00	Basis:	Wet Weight
Seq Number:	3116392				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**164**	49.9	mg/kg	02.13.20 10.08		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	02.12.20 16.20	Basis:	Wet Weight
Seq Number:	3116314				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	02.12.20 16.48	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	02.12.20 16.48	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	02.12.20 16.48	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	02.12.20 16.48	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	02.12.20 16.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	02.12.20 16.48	
o-Terphenyl	84-15-1	98	%	70-135	02.12.20 16.48	

Certificate of Analytical Results 652202

LT Environmental, Inc., Arvada, CO

RDX 28-24

Sample Id:	**PH01A**	Matrix:	Soil	Date Received:	02.12.20 14.49
Lab Sample Id:	652202-001	Date Collected:	02.11.20 11.10	Sample Depth:	12 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.12.20 16.00	Basis:	Wet Weight
Seq Number:	3116351				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.12.20 20.30	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.12.20 20.30	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.12.20 20.30	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	02.12.20 20.30	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.12.20 20.30	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	02.12.20 20.30	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.12.20 20.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	110	%	70-130	02.12.20 20.30	
4-Bromofluorobenzene	460-00-4	97	%	70-130	02.12.20 20.30	

Certificate of Analytical Results 652202

LT Environmental, Inc., Arvada, CO

RDX 28-24

Sample Id:	**PH02A**	Matrix:	Soil	Date Received:	02.12.20 14.49
Lab Sample Id:	652202-002	Date Collected:	02.11.20 12.25	Sample Depth:	10 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.13.20 07.00	Basis:	Wet Weight
Seq Number:	3116392				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**340**	50.1	mg/kg	02.13.20 10.14		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	02.12.20 16.20	Basis:	Wet Weight
Seq Number:	3116314				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	02.12.20 17.08	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	02.12.20 17.08	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	02.12.20 17.08	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	02.12.20 17.08	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	02.12.20 17.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	02.12.20 17.08	
o-Terphenyl	84-15-1	101	%	70-135	02.12.20 17.08	

Certificate of Analytical Results 652202

LT Environmental, Inc., Arvada, CO

RDX 28-24

Sample Id:	**PH02A**	Matrix:	Soil	Date Received:	02.12.20 14.49
Lab Sample Id:	652202-002	Date Collected:	02.11.20 12.25	Sample Depth:	10 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.12.20 16.00	Basis:	Wet Weight
Seq Number:	3116351				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	02.12.20 20.51	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	02.12.20 20.51	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	02.12.20 20.51	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	02.12.20 20.51	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	02.12.20 20.51	U	1
Xylenes, Total	1330-20-7	<0.00201	0.00201	mg/kg	02.12.20 20.51	U	1
Total BTEX		<0.00201	0.00201	mg/kg	02.12.20 20.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	110	%	70-130	02.12.20 20.51	
4-Bromofluorobenzene	460-00-4	97	%	70-130	02.12.20 20.51	

Certificate of Analytical Results 652202

LT Environmental, Inc., Arvada, CO

RDX 28-24

Sample Id: **PH03A** Matrix: Soil Date Received:02.12.20 14.49
Lab Sample Id: 652202-003 Date Collected: 02.11.20 13.00 Sample Depth: 10 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 02.13.20 07.00 Basis: Wet Weight
Seq Number: 3116392

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**634**	49.9	mg/kg	02.13.20 10.30		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DTH % Moisture:
Analyst: DTH Date Prep: 02.12.20 16.30 Basis: Wet Weight
Seq Number: 3116345

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	02.12.20 17.48	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	02.12.20 17.48	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	02.12.20 17.48	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	02.12.20 17.48	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	02.12.20 17.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	02.12.20 17.48	
o-Terphenyl	84-15-1	101	%	70-135	02.12.20 17.48	

Certificate of Analytical Results 652202

LT Environmental, Inc., Arvada, CO

RDX 28-24

Sample Id:	**PH03A**	Matrix:	Soil	Date Received:	02.12.20 14.49
Lab Sample Id:	652202-003	Date Collected:	02.11.20 13.00	Sample Depth:	10 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.12.20 16.00	Basis:	Wet Weight
Seq Number:	3116351				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.12.20 21.11	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.12.20 21.11	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.12.20 21.11	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	02.12.20 21.11	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.12.20 21.11	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	02.12.20 21.11	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.12.20 21.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	97	%	70-130	02.12.20 21.11	
1,4-Difluorobenzene	540-36-3	111	%	70-130	02.12.20 21.11	

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 652202

LT Environmental, Inc.

RDX 28-24

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3116392 — Matrix: Solid — Date Prep: 02.13.20
MB Sample Id: 7696548-1-BLK — LCS Sample Id: 7696548-1-BKS — LCSD Sample Id: 7696548-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	254	102	255	102	90-110	0	20	mg/kg	02.13.20 09:30	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3116392 — Matrix: Soil — Date Prep: 02.13.20
Parent Sample Id: 652201-001 — MS Sample Id: 652201-001 S — MSD Sample Id: 652201-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	16500	201	16700	100	16700	100	90-110	0	20	mg/kg	02.13.20 09:46	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3116392 — Matrix: Soil — Date Prep: 02.13.20
Parent Sample Id: 652220-005 — MS Sample Id: 652220-005 S — MSD Sample Id: 652220-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	8.75	198	216	105	211	102	90-110	2	20	mg/kg	02.13.20 11:03	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3116314 — Matrix: Solid — Date Prep: 02.12.20
MB Sample Id: 7696489-1-BLK — LCS Sample Id: 7696489-1-BKS — LCSD Sample Id: 7696489-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	795	80	834	83	70-135	5	35	mg/kg	02.12.20 11:36	
Diesel Range Organics (DRO)	<50.0	1000	707	71	747	75	70-135	6	35	mg/kg	02.12.20 11:36	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	132		117		112		70-135	%	02.12.20 11:36
o-Terphenyl	130		100		100		70-135	%	02.12.20 11:36

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 652202

LT Environmental, Inc.

RDX 28-24

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3116345 — Matrix: Solid — Date Prep: 02.12.20
MB Sample Id: 7696532-1-BLK — LCS Sample Id: 7696532-1-BKS — LCSD Sample Id: 7696532-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	800	80	893	89	70-135	11	35	mg/kg	02.12.20 17:28	
Diesel Range Organics (DRO)	<50.0	1000	728	73	978	98	70-135	29	35	mg/kg	02.12.20 17:28	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	126		109		135		70-135	%	02.12.20 17:28
o-Terphenyl	126		99		130		70-135	%	02.12.20 17:28

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3116314 — Matrix: Solid — Date Prep: 02.12.20
MB Sample Id: 7696489-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	02.12.20 11:16	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3116345 — Matrix: Solid — Date Prep: 02.12.20
MB Sample Id: 7696532-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	02.12.20 17:28	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3116314 — Matrix: Soil — Date Prep: 02.12.20
Parent Sample Id: 652094-001 — MS Sample Id: 652094-001 S — MSD Sample Id: 652094-001 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)	<50.2	1000	883	88	932	93	70-135	5	35	mg/kg	02.12.20 11:56	
Diesel Range Organics (DRO)	<50.2	1000	967	97	1020	102	70-135	5	35	mg/kg	02.12.20 11:56	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	106		112		70-135	%	02.12.20 11:56
o-Terphenyl	101		108		70-135	%	02.12.20 11:56

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 652202

LT Environmental, Inc.

RDX 28-24

Analytical Method: TPH by SW8015 Mod | Prep Method: SW8015P
Seq Number: 3116345 | Matrix: Soil | Date Prep: 02.12.20
Parent Sample Id: 652202-003 | MS Sample Id: 652202-003 S | MSD Sample Id: 652202-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.1	1000	963	96	934	93	70-135	3	35	mg/kg	02.12.20 18:08	
Diesel Range Organics (DRO)	<50.1	1000	1030	103	1020	102	70-135	1	35	mg/kg	02.12.20 18:08	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	112		114		70-135	%	02.12.20 18:08
o-Terphenyl	124		109		70-135	%	02.12.20 18:08

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3116351 | Matrix: Solid | Date Prep: 02.12.20
MB Sample Id: 7696486-1-BLK | LCS Sample Id: 7696486-1-BKS | LCSD Sample Id: 7696486-1-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	0.118	118	0.125	125	70-130	6	35	mg/kg	02.12.20 12:21	
Toluene	<0.00200	0.100	0.110	110	0.116	116	70-130	5	35	mg/kg	02.12.20 12:21	
Ethylbenzene	<0.00200	0.100	0.106	106	0.112	112	71-129	6	35	mg/kg	02.12.20 12:21	
m,p-Xylenes	<0.00400	0.200	0.209	105	0.220	110	70-135	5	35	mg/kg	02.12.20 12:21	
o-Xylene	<0.00200	0.100	0.104	104	0.110	110	71-133	6	35	mg/kg	02.12.20 12:21	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	110		108		108		70-130	%	02.12.20 12:21
4-Bromofluorobenzene	96		93		94		70-130	%	02.12.20 12:21

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3116351 | Matrix: Soil | Date Prep: 02.12.20
Parent Sample Id: 652094-001 | MS Sample Id: 652094-001 S | MSD Sample Id: 652094-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.106	106	0.125	125	70-130	16	35	mg/kg	02.12.20 13:02	
Toluene	<0.00199	0.0996	0.111	111	0.116	116	70-130	4	35	mg/kg	02.12.20 13:02	
Ethylbenzene	<0.00199	0.0996	0.108	108	0.112	112	71-129	4	35	mg/kg	02.12.20 13:02	
m,p-Xylenes	<0.00398	0.199	0.190	95	0.219	110	70-135	14	35	mg/kg	02.12.20 13:02	
o-Xylene	<0.00199	0.0996	0.102	102	0.110	110	71-133	8	35	mg/kg	02.12.20 13:02	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		107		70-130	%	02.12.20 13:02
4-Bromofluorobenzene	95		94		70-130	%	02.12.20 13:02

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

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

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

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

Chain of Custody

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432) 704-5440 EL Paso,TX (915) 585-3443 Lubbock,TX (806) 794-1296 Craslbad, NM (432) 704-5440
Phoenix,AZ (480) 355-0900 Atlanta,GA (770) 449-8800 Tampa,FL (813) 620-2000 West Palm Beach, FL (561) 689-6701
www.xenco.com

Work Order No: U52202

Page 1 of 1

Project Manager:	Chris McKissen	Bill to: (if different)	
Company Name:	LT Environmental	Company Name:	
Address:	820 Megan Ave, Unit B	Address:	
City, State ZIP:	Rifle, CO 81650	City, State ZIP:	
Phone:	970 285 9985	Email:	cmckissen@ltenv.com tabyers@ltenv.com

Work Order Comments

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

Project Name:	RDX 28-24	Turn Around	
Project Number:	034820003	Routine	☒
Project Location	Rural Eddy County	Rush:	
Sampler's Name:	Anna Byers	Due Date:	
PO #:		Quote #:	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	1.4	Thermometer ID	T-NM-007
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	3

Preservative Codes

MeOH: Me
None: NO
HNO3: HN
H2S04: H2
HCL: HL
NaOH: Na
Zn Acetate+ NaOH: Zn

TAT starts the day recevied by the lab, if received by 4:00pm

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Pres. Code	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)	Sample Comments
	PH01A	S	2/11/20	1110	12'	1		X	X	X	
	PH02A	S	2/11/20	1225	10'	1		X	X	X	
	PH03A	S	2/11/20	1300	10'	1		X	X	X	

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr 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
Anna Byers		2/12/20 14:49	2		
			4		
			6		

Revised Date 022619 Rev. 2019.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 02.12.2020 02.49.00 PM

Work Order #: 652202

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

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1.4
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**
#5 Custody Seals intact on sample bottles?	**Yes**
#6*Custody Seals Signed and dated?	**Yes**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**No**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 02.12.2020

Checklist reviewed by: Jessica Kramer Date: 02.13.2020

Jessica Kramer

Analytical Report 653577

for

LT Environmental, Inc.

Project Manager: Chris McKisson

RDX 28-24

034820003

05-MAR-20

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

05-MAR-20

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

Reference: XENCO Report No(s): **653577**
RDX 28-24
Project Address:

Chris McKisson:

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) 653577. 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. 653577 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 653577

LT Environmental, Inc., Arvada, CO

RDX 28-24

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS01	S	02-24-20 12:01	0.3 ft	653577-001
FS02	S	02-24-20 12:07	0.3 ft	653577-002
FS03	S	02-24-20 12:13	0.5 ft	653577-003
FS07	S	02-24-20 13:11	0.3 ft	653577-004
FS08	S	02-24-20 13:15	0.3 ft	653577-005
FS09	S	02-24-20 13:21	0.5 ft	653577-006
FS10	S	02-24-20 13:26	0.3 ft	653577-007
FS11	S	02-24-20 13:32	6.0 ft	653577-008
FS12	S	02-24-20 13:36	2.0 ft	653577-009
FS13	S	02-24-20 14:18	0.3 ft	653577-010
FS14	S	02-24-20 14:24	0.5 ft	653577-011
FS15	S	02-24-20 14:29	0.5 ft	653577-012
FS16	S	02-24-20 14:34	0.3 ft	653577-013
FS17	S	02-24-20 14:38	0.5 ft	653577-014
FS18	S	02-24-20 14:43	0.5 ft	653577-015
FS19	S	02-24-20 15:08	0.5 ft	653577-016
FS20	S	02-24-20 15:12	0.3 ft	653577-017
SW03	S	02-24-20 15:26	0.5 - 6 ft	653577-018
SW04	S	02-24-20 15:30	0.5 - 6 ft	653577-019

CASE NARRATIVE

Client Name: LT Environmental, Inc.
Project Name: RDX 28-24

Project ID: *034820003*
Work Order Number(s): *653577*

Report Date: *05-MAR-20*
Date Received: *02/25/2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3118395 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3118399 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3118602 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 653577

LT Environmental, Inc., Arvada, CO

Project Name: RDX 28-24

Project Id: 034820003
Contact: Chris McKisson
Project Location:

Date Received in Lab: Tue Feb-25-20 10:12 am
Report Date: 05-MAR-20
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	653577-001		653577-002		653577-003		653577-004		653577-005		653577-006	
	Field Id:	FS01		FS02		FS03		FS07		FS08		FS09	
	Depth:	0.3- ft		0.3- ft		0.5- ft		0.3- ft		0.3- ft		0.5- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Feb-24-20 12:01		Feb-24-20 12:07		Feb-24-20 12:13		Feb-24-20 13:11		Feb-24-20 13:15		Feb-24-20 13:21	
BTEX by EPA 8021B SUB: T104704400-19-19	***Extracted:***	Mar-04-20 11:00		Mar-04-20 11:00		Mar-04-20 11:00		Mar-04-20 11:00		Mar-03-20 09:00		Mar-04-20 11:00	
	Analyzed:	Mar-04-20 15:20		Mar-04-20 15:40		Mar-04-20 16:01		Mar-04-20 16:22		Mar-03-20 12:02		Mar-04-20 16:42	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00201	0.00201	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200
Toluene		<0.00201	0.00201	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200
Ethylbenzene		<0.00201	0.00201	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200
m,p-Xylenes		<0.00402	0.00402	<0.00399	0.00399	<0.00402	0.00402	<0.00401	0.00401	<0.00398	0.00398	<0.00401	0.00401
o-Xylene		<0.00201	0.00201	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200
Xylenes, Total		<0.00201	0.00201	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200
Total BTEX		<0.00201	0.00201	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200
Chloride by EPA 300 SUB: T104704400-19-19	***Extracted:***	Feb-26-20 16:05		Feb-26-20 16:05		Feb-26-20 16:05		Feb-26-20 16:05		Feb-26-20 16:05		Feb-26-20 15:50	
	Analyzed:	Feb-26-20 18:32		Feb-26-20 18:37		Feb-26-20 18:42		Feb-26-20 18:48		Feb-26-20 18:53		Feb-26-20 16:33	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		9720	99.2	10300	99.0	6990	248	8590	248	8860	249	12800	252
TPH by SW8015 Mod SUB: T104704400-19-19	***Extracted:***	Feb-27-20 12:00		Feb-27-20 12:00		Feb-27-20 12:00		Feb-27-20 12:00		Feb-27-20 12:00		Feb-27-20 12:00	
	Analyzed:	Feb-27-20 12:59		Feb-27-20 14:02		Feb-27-20 14:22		Feb-27-20 14:43		Feb-27-20 15:04		Feb-27-20 15:25	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0	<50.0	50.0	<49.9	49.9	<49.9	49.9	<50.0	50.0	<49.9	49.9
Diesel Range Organics (DRO)		<50.0	50.0	52.6	50.0	<49.9	49.9	<49.9	49.9	<50.0	50.0	308	49.9
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<50.0	50.0	<49.9	49.9	<49.9	49.9	<50.0	50.0	<49.9	49.9
Total GRO-DRO		<50.0	50.0	52.6	50.0	<49.9	49.9	<49.9	49.9	<50.0	50.0	308	49.9
Total TPH		<50.0	50.0	52.6	50.0	<49.9	49.9	<49.9	49.9	<50.0	50.0	308	49.9

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Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 653577

LT Environmental, Inc., Arvada, CO

Project Name: RDX 28-24

Project Id: 034820003
Contact: Chris McKisson
Project Location:

Date Received in Lab: Tue Feb-25-20 10:12 am
Report Date: 05-MAR-20
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	653577-007		653577-008		653577-009		653577-010		653577-011		653577-012	
	Field Id:	FS10		FS11		FS12		FS13		FS14		FS15	
	Depth:	0.3- ft		6.0- ft		2.0- ft		0.3- ft		0.5- ft		0.5- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Feb-24-20 13:26		Feb-24-20 13:32		Feb-24-20 13:36		Feb-24-20 14:18		Feb-24-20 14:24		Feb-24-20 14:29	
BTEX by EPA 8021B SUB: T104704400-19-19	***Extracted:***	Mar-04-20 11:00		Mar-04-20 11:00		Mar-04-20 11:00		Mar-04-20 11:00		Mar-04-20 11:00		Mar-04-20 11:00	
	Analyzed:	Mar-04-20 17:03		Mar-04-20 17:23		Mar-04-20 17:44		Mar-04-20 18:04		Mar-04-20 18:25		Mar-04-20 20:05	
	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	<0.00199	0.00199	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200
Toluene		<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200
Ethylbenzene		<0.00200	0.00200	<0.00201	0.00201	0.00524	0.00199	0.0144	0.00202	<0.00200	0.00200	<0.00200	0.00200
m,p-Xylenes		<0.00401	0.00401	<0.00402	0.00402	0.0175	0.00398	<0.00403	0.00403	<0.00399	0.00399	<0.00399	0.00399
o-Xylene		<0.00200	0.00200	<0.00201	0.00201	0.0141	0.00199	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200
Xylenes, Total		<0.00200	0.00200	<0.00201	0.00201	0.0316	0.00199	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200
Total BTEX		<0.00200	0.00200	<0.00201	0.00201	0.0368	0.00199	0.0144	0.00202	<0.00200	0.00200	<0.00200	0.00200
Chloride by EPA 300 SUB: T104704400-19-19	***Extracted:***	Feb-26-20 15:50		Feb-26-20 15:50		Feb-26-20 15:50		Feb-26-20 15:50		Feb-26-20 15:50		Feb-26-20 15:50	
	Analyzed:	Feb-26-20 16:39		Feb-26-20 16:45		Feb-26-20 16:52		Feb-26-20 17:10		Feb-26-20 17:17		Feb-26-20 17:23	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		15200	250	11900	249	13000	248	8290	100	12500	249	18300	252
TPH by SW8015 Mod SUB: T104704400-19-19	***Extracted:***	Feb-27-20 12:00		Feb-27-20 12:00		Feb-27-20 12:00		Feb-27-20 12:00		Feb-27-20 12:00		Feb-27-20 12:00	
	Analyzed:	Feb-27-20 15:46		Feb-27-20 16:07		Feb-27-20 16:28		Feb-27-20 16:48		Feb-27-20 17:30		Feb-27-20 17:51	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0	<49.8	49.8	70.3	50.0	<49.9	49.9	<49.8	49.8	<50.0	50.0
Diesel Range Organics (DRO)		75.0	50.0	270	49.8	1220	50.0	<49.9	49.9	822	49.8	207	50.0
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<49.8	49.8	141	50.0	<49.9	49.9	94.0	49.8	<50.0	50.0
Total GRO-DRO		75.0	50.0	270	49.8	1290	50.0	<49.9	49.9	822	49.8	207	50.0
Total TPH		75.0	50.0	270	49.8	1430	50.0	<49.9	49.9	916	49.8	207	50.0

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Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 653577

LT Environmental, Inc., Arvada, CO

Project Name: RDX 28-24

Project Id: 034820003
Contact: Chris McKisson
Project Location:

Date Received in Lab: Tue Feb-25-20 10:12 am
Report Date: 05-MAR-20
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	653577-013		653577-014		653577-015		653577-016		653577-017		653577-018	
	Field Id:	FS16		FS17		FS18		FS19		FS20		SW03	
	Depth:	0.3- ft		0.5- ft		0.5- ft		0.5- ft		0.3- ft		0.5-6 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Feb-24-20 14:34		Feb-24-20 14:38		Feb-24-20 14:43		Feb-24-20 15:08		Feb-24-20 15:12		Feb-24-20 15:26	
BTEX by EPA 8021B SUB: T104704400-19-19	***Extracted:***	Mar-04-20 11:00		Mar-04-20 11:00		Mar-02-20 08:00		Mar-02-20 08:00		Mar-02-20 08:00		Mar-02-20 08:00	
	Analyzed:	Mar-04-20 20:26		Mar-04-20 20:46		Mar-03-20 14:52		Mar-02-20 22:37		Mar-02-20 22:57		Mar-02-20 23:17	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00202	0.00202	<0.00201	0.00201	<0.00202	0.00202	<0.00201	0.00201	<0.00201	0.00201	<0.00200	0.00200
Toluene		<0.00202	0.00202	<0.00201	0.00201	<0.00202	0.00202	<0.00201	0.00201	<0.00201	0.00201	<0.00200	0.00200
Ethylbenzene		<0.00202	0.00202	<0.00201	0.00201	<0.00202	0.00202	<0.00201	0.00201	<0.00201	0.00201	<0.00200	0.00200
m,p-Xylenes		<0.00404	0.00404	<0.00402	0.00402	<0.00403	0.00403	<0.00402	0.00402	<0.00402	0.00402	<0.00400	0.00400
o-Xylene		<0.00202	0.00202	<0.00201	0.00201	<0.00202	0.00202	<0.00201	0.00201	<0.00201	0.00201	<0.00200	0.00200
Xylenes, Total		<0.00202	0.00202	<0.00201	0.00201	<0.00202	0.00202	<0.00201	0.00201	<0.00201	0.00201	<0.00200	0.00200
Total BTEX		<0.00202	0.00202	<0.00201	0.00201	<0.00202	0.00202	<0.00201	0.00201	<0.00201	0.00201	<0.00200	0.00200
Chloride by EPA 300 SUB: T104704400-19-19	***Extracted:***	Feb-26-20 15:50		Feb-26-20 15:50		Feb-26-20 15:50		Feb-26-20 15:50		Feb-26-20 15:50		Feb-26-20 15:50	
	Analyzed:	Feb-26-20 17:29		Feb-26-20 17:35		Feb-26-20 18:00		Feb-26-20 18:07		Feb-26-20 18:25		Feb-26-20 18:32	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		12800	251	7310	99.2	18000	252	11600	251	13300	99.6	10300	99.2
TPH by SW8015 Mod SUB: T104704400-19-19	***Extracted:***	Feb-27-20 12:00		Feb-27-20 12:00		Feb-27-20 12:00		Feb-27-20 12:00		Feb-27-20 12:00		Feb-27-20 12:00	
	Analyzed:	Feb-27-20 18:12		Feb-27-20 18:33		Feb-27-20 18:54		Feb-27-20 19:15		Feb-27-20 19:36		Feb-27-20 19:57	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0	<49.9	49.9	<50.0	50.0	<50.0	50.0	<49.9	49.9	<49.8	49.8
Diesel Range Organics (DRO)		846	50.0	<49.9	49.9	<50.0	50.0	<50.0	50.0	<49.9	49.9	<49.8	49.8
Motor Oil Range Hydrocarbons (MRO)		112	50.0	<49.9	49.9	<50.0	50.0	<50.0	50.0	<49.9	49.9	<49.8	49.8
Total GRO-DRO		846	50.0	<49.9	49.9	<50.0	50.0	<50.0	50.0	<49.9	49.9	<49.8	49.8
Total TPH		958	50.0	<49.9	49.9	<50.0	50.0	<50.0	50.0	<49.9	49.9	<49.8	49.8

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Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 653577

LT Environmental, Inc., Arvada, CO

Project Name: RDX 28-24

Project Id: 034820003
Contact: Chris McKisson
Project Location:

Date Received in Lab: Tue Feb-25-20 10:12 am
Report Date: 05-MAR-20
Project Manager: Jessica Kramer

Analysis Requested							
	Lab Id:	653577-019					
	Field Id:	SW04					
	Depth:	0.5-6 ft					
	Matrix:	SOIL					
	Sampled:	Feb-24-20 15:30					
BTEX by EPA 8021B SUB: T104704400-19-19	***Extracted:***	Mar-02-20 08:00					
	Analyzed:	Mar-02-20 23:37					
	Units/RL:	mg/kg	RL				
Benzene		<0.00199	0.00199				
Toluene		<0.00199	0.00199				
Ethylbenzene		<0.00199	0.00199				
m,p-Xylenes		<0.00398	0.00398				
o-Xylene		<0.00199	0.00199				
Xylenes, Total		<0.00199	0.00199				
Total BTEX		<0.00199	0.00199				
Chloride by EPA 300 SUB: T104704400-19-19	***Extracted:***	Feb-26-20 15:50					
	Analyzed:	Feb-26-20 18:38					
	Units/RL:	mg/kg	RL				
Chloride		13300	251				
TPH by SW8015 Mod SUB: T104704400-19-19	***Extracted:***	Feb-27-20 12:00					
	Analyzed:	Feb-27-20 20:18					
	Units/RL:	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0				
Diesel Range Organics (DRO)		<50.0	50.0				
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0				
Total GRO-DRO		<50.0	50.0				
Total TPH		<50.0	50.0				

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Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analytical Results 653577

LT Environmental, Inc., Arvada, CO

RDX 28-24

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	02.25.20 10.12
Lab Sample Id:	653577-001	Date Collected:	02.24.20 12.01	Sample Depth:	0.3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.26.20 16.05	Basis:	Wet Weight
Seq Number:	3117802			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**9720**	99.2	mg/kg	02.26.20 18.32		20

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	02.27.20 12.00	Basis:	Wet Weight
Seq Number:	3118030			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	02.27.20 12.59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	02.27.20 12.59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	02.27.20 12.59	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	02.27.20 12.59	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	02.27.20 12.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	81	%	70-135	02.27.20 12.59	
o-Terphenyl	84-15-1	81	%	70-135	02.27.20 12.59	

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LT Environmental, Inc., Arvada, CO

RDX 28-24

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	02.25.20 10.12
Lab Sample Id:	653577-001	Date Collected:	02.24.20 12.01	Sample Depth:	0.3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	03.04.20 11.00	Basis:	Wet Weight
Seq Number:	3118602			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.04.20 15.20	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.04.20 15.20	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.04.20 15.20	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.04.20 15.20	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.04.20 15.20	U	1
Xylenes, Total	1330-20-7	<0.00201	0.00201	mg/kg	03.04.20 15.20	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.04.20 15.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	116	%	70-130	03.04.20 15.20	
1,4-Difluorobenzene	540-36-3	93	%	70-130	03.04.20 15.20	

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LT Environmental, Inc., Arvada, CO

RDX 28-24

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	02.25.20 10.12
Lab Sample Id:	653577-002	Date Collected:	02.24.20 12.07	Sample Depth:	0.3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.26.20 16.05	Basis:	Wet Weight
Seq Number:	3117802			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**10300**	99.0	mg/kg	02.26.20 18.37		20

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	02.27.20 12.00	Basis:	Wet Weight
Seq Number:	3118030			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	02.27.20 14.02	U	1
Diesel Range Organics (DRO)	C10C28DRO	**52.6**	50.0	mg/kg	02.27.20 14.02		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	02.27.20 14.02	U	1
Total GRO-DRO	PHC628	**52.6**	50.0	mg/kg	02.27.20 14.02		1
Total TPH	PHC635	**52.6**	50.0	mg/kg	02.27.20 14.02		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	71	%	70-135	02.27.20 14.02	
o-Terphenyl	84-15-1	74	%	70-135	02.27.20 14.02	

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LT Environmental, Inc., Arvada, CO

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Sample Id:	**FS02**	Matrix:	Soil	Date Received:	02.25.20 10.12
Lab Sample Id:	653577-002	Date Collected:	02.24.20 12.07	Sample Depth:	0.3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	03.04.20 11.00	Basis:	Wet Weight
Seq Number:	3118602			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.04.20 15.40	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.04.20 15.40	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.04.20 15.40	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	03.04.20 15.40	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.04.20 15.40	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	03.04.20 15.40	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.04.20 15.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	03.04.20 15.40	
1,4-Difluorobenzene	540-36-3	94	%	70-130	03.04.20 15.40	

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LT Environmental, Inc., Arvada, CO

RDX 28-24

Sample Id: **FS03** Matrix: Soil Date Received:02.25.20 10.12
Lab Sample Id: 653577-003 Date Collected: 02.24.20 12.13 Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: CHE % Moisture:
Analyst: CHE Date Prep: 02.26.20 16.05 Basis: Wet Weight
Seq Number: 3117802 SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**6990**	248	mg/kg	02.26.20 18.42		50

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DVM % Moisture:
Analyst: ARM Date Prep: 02.27.20 12.00 Basis: Wet Weight
Seq Number: 3118030 SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	02.27.20 14.22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	02.27.20 14.22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	02.27.20 14.22	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	02.27.20 14.22	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	02.27.20 14.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	74	%	70-135	02.27.20 14.22	
o-Terphenyl	84-15-1	74	%	70-135	02.27.20 14.22	

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Sample Id:	**FS03**	Matrix:	Soil	Date Received:	02.25.20 10.12
Lab Sample Id:	653577-003	Date Collected:	02.24.20 12.13	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	03.04.20 11.00	Basis:	Wet Weight
Seq Number:	3118602			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.04.20 16.01	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.04.20 16.01	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.04.20 16.01	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.04.20 16.01	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.04.20 16.01	U	1
Xylenes, Total	1330-20-7	<0.00201	0.00201	mg/kg	03.04.20 16.01	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.04.20 16.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	114	%	70-130	03.04.20 16.01	
1,4-Difluorobenzene	540-36-3	95	%	70-130	03.04.20 16.01	

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LT Environmental, Inc., Arvada, CO

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Sample Id:	**FS07**	Matrix:	Soil	Date Received:	02.25.20 10.12
Lab Sample Id:	653577-004	Date Collected:	02.24.20 13.11	Sample Depth:	0.3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.26.20 16.05	Basis:	Wet Weight
Seq Number:	3117802			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8590**	248	mg/kg	02.26.20 18.48		50

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	02.27.20 12.00	Basis:	Wet Weight
Seq Number:	3118030			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	02.27.20 14.43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	02.27.20 14.43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	02.27.20 14.43	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	02.27.20 14.43	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	02.27.20 14.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	72	%	70-135	02.27.20 14.43	
o-Terphenyl	84-15-1	73	%	70-135	02.27.20 14.43	

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Sample Id:	**FS07**	Matrix:	Soil	Date Received:	02.25.20 10.12
Lab Sample Id:	653577-004	Date Collected:	02.24.20 13.11	Sample Depth:	0.3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	03.04.20 11.00	Basis:	Wet Weight
Seq Number:	3118602			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.04.20 16.22	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.04.20 16.22	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.04.20 16.22	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	03.04.20 16.22	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.04.20 16.22	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	03.04.20 16.22	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.04.20 16.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	110	%	70-130	03.04.20 16.22	
1,4-Difluorobenzene	540-36-3	94	%	70-130	03.04.20 16.22	

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RDX 28-24

Sample Id:	**FS08**	Matrix:	Soil	Date Received:	02.25.20 10.12
Lab Sample Id:	653577-005	Date Collected:	02.24.20 13.15	Sample Depth:	0.3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.26.20 16.05	Basis:	Wet Weight
Seq Number:	3117802			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8860**	249	mg/kg	02.26.20 18.53		50

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	02.27.20 12.00	Basis:	Wet Weight
Seq Number:	3118030			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	02.27.20 15.04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	02.27.20 15.04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	02.27.20 15.04	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	02.27.20 15.04	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	02.27.20 15.04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	71	%	70-135	02.27.20 15.04	
o-Terphenyl	84-15-1	73	%	70-135	02.27.20 15.04	

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RDX 28-24

Sample Id:	**FS08**	Matrix:	Soil	Date Received:	02.25.20 10.12
Lab Sample Id:	653577-005	Date Collected:	02.24.20 13.15	Sample Depth:	0.3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	03.03.20 09.00	Basis:	Wet Weight
Seq Number:	3118399			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.03.20 12.02	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.03.20 12.02	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.03.20 12.02	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.03.20 12.02	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.03.20 12.02	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	03.03.20 12.02	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.03.20 12.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	98	%	70-130	03.03.20 12.02	
1,4-Difluorobenzene	540-36-3	94	%	70-130	03.03.20 12.02	

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RDX 28-24

Sample Id:	**FS09**	Matrix:	Soil	Date Received:	02.25.20 10.12
Lab Sample Id:	653577-006	Date Collected:	02.24.20 13.21	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.26.20 15.50	Basis:	Wet Weight
Seq Number:	3117800			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**12800**	252	mg/kg	02.26.20 16.33		50

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	02.27.20 12.00	Basis:	Wet Weight
Seq Number:	3118030			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	02.27.20 15.25	U	1
Diesel Range Organics (DRO)	C10C28DRO	**308**	49.9	mg/kg	02.27.20 15.25		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	02.27.20 15.25	U	1
Total GRO-DRO	PHC628	**308**	49.9	mg/kg	02.27.20 15.25		1
Total TPH	PHC635	**308**	49.9	mg/kg	02.27.20 15.25		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	74	%	70-135	02.27.20 15.25	
o-Terphenyl	84-15-1	75	%	70-135	02.27.20 15.25	

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Sample Id:	**FS09**	Matrix:	Soil	Date Received:	02.25.20 10.12
Lab Sample Id:	653577-006	Date Collected:	02.24.20 13.21	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	03.04.20 11.00	Basis:	Wet Weight
Seq Number:	3118602			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.04.20 16.42	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.04.20 16.42	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.04.20 16.42	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	03.04.20 16.42	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.04.20 16.42	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	03.04.20 16.42	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.04.20 16.42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	125	%	70-130	03.04.20 16.42	
1,4-Difluorobenzene	540-36-3	94	%	70-130	03.04.20 16.42	

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RDX 28-24

Sample Id:	**FS10**	Matrix:	Soil	Date Received:	02.25.20 10.12
Lab Sample Id:	653577-007	Date Collected:	02.24.20 13.26	Sample Depth:	0.3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.26.20 15.50	Basis:	Wet Weight
Seq Number:	3117800			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**15200**	250	mg/kg	02.26.20 16.39		50

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	02.27.20 12.00	Basis:	Wet Weight
Seq Number:	3118030			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	02.27.20 15.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	**75.0**	50.0	mg/kg	02.27.20 15.46		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	02.27.20 15.46	U	1
Total GRO-DRO	PHC628	**75.0**	50.0	mg/kg	02.27.20 15.46		1
Total TPH	PHC635	**75.0**	50.0	mg/kg	02.27.20 15.46		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	72	%	70-135	02.27.20 15.46	
o-Terphenyl	84-15-1	74	%	70-135	02.27.20 15.46	

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Sample Id:	**FS10**	Matrix:	Soil	Date Received:	02.25.20 10.12
Lab Sample Id:	653577-007	Date Collected:	02.24.20 13.26	Sample Depth:	0.3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	03.04.20 11.00	Basis:	Wet Weight
Seq Number:	3118602			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.04.20 17.03	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.04.20 17.03	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.04.20 17.03	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	03.04.20 17.03	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.04.20 17.03	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	03.04.20 17.03	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.04.20 17.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	93	%	70-130	03.04.20 17.03	
4-Bromofluorobenzene	460-00-4	113	%	70-130	03.04.20 17.03	

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Sample Id:	**FS11**	Matrix:	Soil	Date Received:	02.25.20 10.12
Lab Sample Id:	653577-008	Date Collected:	02.24.20 13.32	Sample Depth:	6.0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.26.20 15.50	Basis:	Wet Weight
Seq Number:	3117800			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**11900**	249	mg/kg	02.26.20 16.45		50

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	02.27.20 12.00	Basis:	Wet Weight
Seq Number:	3118030			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	02.27.20 16.07	U	1
Diesel Range Organics (DRO)	C10C28DRO	**270**	49.8	mg/kg	02.27.20 16.07		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	02.27.20 16.07	U	1
Total GRO-DRO	PHC628	**270**	49.8	mg/kg	02.27.20 16.07		1
Total TPH	PHC635	**270**	49.8	mg/kg	02.27.20 16.07		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	72	%	70-135	02.27.20 16.07	
o-Terphenyl	84-15-1	76	%	70-135	02.27.20 16.07	

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Sample Id:	**FS11**	Matrix:	Soil	Date Received:	02.25.20 10.12
Lab Sample Id:	653577-008	Date Collected:	02.24.20 13.32	Sample Depth:	6.0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	03.04.20 11.00	Basis:	Wet Weight
Seq Number:	3118602			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.04.20 17.23	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.04.20 17.23	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.04.20 17.23	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.04.20 17.23	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.04.20 17.23	U	1
Xylenes, Total	1330-20-7	<0.00201	0.00201	mg/kg	03.04.20 17.23	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.04.20 17.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	114	%	70-130	03.04.20 17.23	
1,4-Difluorobenzene	540-36-3	98	%	70-130	03.04.20 17.23	

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Sample Id:	**FS12**	Matrix:	Soil	Date Received:	02.25.20 10.12
Lab Sample Id:	653577-009	Date Collected:	02.24.20 13.36	Sample Depth:	2.0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.26.20 15.50	Basis:	Wet Weight
Seq Number:	3117800			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**13000**	248	mg/kg	02.26.20 16.52		50

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	02.27.20 12.00	Basis:	Wet Weight
Seq Number:	3118030			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**70.3**	50.0	mg/kg	02.27.20 16.28		1
Diesel Range Organics (DRO)	C10C28DRO	**1220**	50.0	mg/kg	02.27.20 16.28		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**141**	50.0	mg/kg	02.27.20 16.28		1
Total GRO-DRO	PHC628	**1290**	50.0	mg/kg	02.27.20 16.28		1
Total TPH	PHC635	**1430**	50.0	mg/kg	02.27.20 16.28		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	78	%	70-135	02.27.20 16.28	
o-Terphenyl	84-15-1	82	%	70-135	02.27.20 16.28	

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Sample Id:	**FS12**	Matrix:	Soil	Date Received:	02.25.20 10.12
Lab Sample Id:	653577-009	Date Collected:	02.24.20 13.36	Sample Depth:	2.0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	03.04.20 11.00	Basis:	Wet Weight
Seq Number:	3118602			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.04.20 17.44	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.04.20 17.44	U	1
Ethylbenzene	100-41-4	**0.00524**	0.00199	mg/kg	03.04.20 17.44		1
m,p-Xylenes	179601-23-1	**0.0175**	0.00398	mg/kg	03.04.20 17.44		1
o-Xylene	95-47-6	**0.0141**	0.00199	mg/kg	03.04.20 17.44		1
Xylenes, Total	1330-20-7	**0.0316**	0.00199	mg/kg	03.04.20 17.44		1
Total BTEX		**0.0368**	0.00199	mg/kg	03.04.20 17.44		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	110	%	70-130	03.04.20 17.44	
1,4-Difluorobenzene	540-36-3	92	%	70-130	03.04.20 17.44	

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Sample Id:	**FS13**	Matrix:	Soil	Date Received:	02.25.20 10.12
Lab Sample Id:	653577-010	Date Collected:	02.24.20 14.18	Sample Depth:	0.3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.26.20 15.50	Basis:	Wet Weight
Seq Number:	3117800			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8290**	100	mg/kg	02.26.20 17.10		20

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	02.27.20 12.00	Basis:	Wet Weight
Seq Number:	3118030			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	02.27.20 16.48	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	02.27.20 16.48	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	02.27.20 16.48	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	02.27.20 16.48	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	02.27.20 16.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	79	%	70-135	02.27.20 16.48	
o-Terphenyl	84-15-1	76	%	70-135	02.27.20 16.48	

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Sample Id:	**FS13**	Matrix:	Soil	Date Received:	02.25.20 10.12
Lab Sample Id:	653577-010	Date Collected:	02.24.20 14.18	Sample Depth:	0.3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	03.04.20 11.00	Basis:	Wet Weight
Seq Number:	3118602			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	03.04.20 18.04	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	03.04.20 18.04	U	1
Ethylbenzene	100-41-4	**0.0144**	0.00202	mg/kg	03.04.20 18.04		1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	03.04.20 18.04	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	03.04.20 18.04	U	1
Xylenes, Total	1330-20-7	<0.00202	0.00202	mg/kg	03.04.20 18.04	U	1
Total BTEX		**0.0144**	0.00202	mg/kg	03.04.20 18.04		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	122	%	70-130	03.04.20 18.04	
1,4-Difluorobenzene	540-36-3	93	%	70-130	03.04.20 18.04	

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Sample Id:	**FS14**	Matrix:	Soil	Date Received:	02.25.20 10.12
Lab Sample Id:	653577-011	Date Collected:	02.24.20 14.24	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.26.20 15.50	Basis:	Wet Weight
Seq Number:	3117800			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**12500**	249	mg/kg	02.26.20 17.17		50

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	02.27.20 12.00	Basis:	Wet Weight
Seq Number:	3118030			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	02.27.20 17.30	U	1
Diesel Range Organics (DRO)	C10C28DRO	**822**	49.8	mg/kg	02.27.20 17.30		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**94.0**	49.8	mg/kg	02.27.20 17.30		1
Total GRO-DRO	PHC628	**822**	49.8	mg/kg	02.27.20 17.30		1
Total TPH	PHC635	**916**	49.8	mg/kg	02.27.20 17.30		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	81	%	70-135	02.27.20 17.30	
o-Terphenyl	84-15-1	90	%	70-135	02.27.20 17.30	

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Sample Id:	**FS14**	Matrix:	Soil	Date Received:	02.25.20 10.12
Lab Sample Id:	653577-011	Date Collected:	02.24.20 14.24	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	03.04.20 11.00	Basis:	Wet Weight
Seq Number:	3118602			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.04.20 18.25	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.04.20 18.25	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.04.20 18.25	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	03.04.20 18.25	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.04.20 18.25	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	03.04.20 18.25	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.04.20 18.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	109	%	70-130	03.04.20 18.25	
1,4-Difluorobenzene	540-36-3	94	%	70-130	03.04.20 18.25	

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Sample Id:	**FS15**	Matrix:	Soil	Date Received:	02.25.20 10.12
Lab Sample Id:	653577-012	Date Collected:	02.24.20 14.29	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.26.20 15.50	Basis:	Wet Weight
Seq Number:	3117800			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**18300**	252	mg/kg	02.26.20 17.23		50

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	02.27.20 12.00	Basis:	Wet Weight
Seq Number:	3118030			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	02.27.20 17.51	U	1
Diesel Range Organics (DRO)	C10C28DRO	**207**	50.0	mg/kg	02.27.20 17.51		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	02.27.20 17.51	U	1
Total GRO-DRO	PHC628	**207**	50.0	mg/kg	02.27.20 17.51		1
Total TPH	PHC635	**207**	50.0	mg/kg	02.27.20 17.51		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	73	%	70-135	02.27.20 17.51	
o-Terphenyl	84-15-1	75	%	70-135	02.27.20 17.51	

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Sample Id:	**FS15**	Matrix:	Soil	Date Received:	02.25.20 10.12
Lab Sample Id:	653577-012	Date Collected:	02.24.20 14.29	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	03.04.20 11.00	Basis:	Wet Weight
Seq Number:	3118602			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.04.20 20.05	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.04.20 20.05	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.04.20 20.05	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	03.04.20 20.05	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.04.20 20.05	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	03.04.20 20.05	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.04.20 20.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	107	%	70-130	03.04.20 20.05	
1,4-Difluorobenzene	540-36-3	100	%	70-130	03.04.20 20.05	

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Sample Id:	**FS16**	Matrix:	Soil	Date Received:	02.25.20 10.12
Lab Sample Id:	653577-013	Date Collected:	02.24.20 14.34	Sample Depth:	0.3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.26.20 15.50	Basis:	Wet Weight
Seq Number:	3117800			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**12800**	251	mg/kg	02.26.20 17.29		50

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	02.27.20 12.00	Basis:	Wet Weight
Seq Number:	3118030			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	02.27.20 18.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	**846**	50.0	mg/kg	02.27.20 18.12		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**112**	50.0	mg/kg	02.27.20 18.12		1
Total GRO-DRO	PHC628	**846**	50.0	mg/kg	02.27.20 18.12		1
Total TPH	PHC635	**958**	50.0	mg/kg	02.27.20 18.12		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	72	%	70-135	02.27.20 18.12	
o-Terphenyl	84-15-1	78	%	70-135	02.27.20 18.12	

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Sample Id:	**FS16**	Matrix:	Soil	Date Received:	02.25.20 10.12
Lab Sample Id:	653577-013	Date Collected:	02.24.20 14.34	Sample Depth:	0.3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	03.04.20 11.00	Basis:	Wet Weight
Seq Number:	3118602			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	03.04.20 20.26	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	03.04.20 20.26	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	03.04.20 20.26	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	03.04.20 20.26	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	03.04.20 20.26	U	1
Xylenes, Total	1330-20-7	<0.00202	0.00202	mg/kg	03.04.20 20.26	U	1
Total BTEX		<0.00202	0.00202	mg/kg	03.04.20 20.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	96	%	70-130	03.04.20 20.26	
1,4-Difluorobenzene	540-36-3	101	%	70-130	03.04.20 20.26	

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Sample Id:	**FS17**	Matrix:	Soil	Date Received:	02.25.20 10.12
Lab Sample Id:	653577-014	Date Collected:	02.24.20 14.38	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.26.20 15.50	Basis:	Wet Weight
Seq Number:	3117800			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**7310**	99.2	mg/kg	02.26.20 17.35		20

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	02.27.20 12.00	Basis:	Wet Weight
Seq Number:	3118030			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	02.27.20 18.33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	02.27.20 18.33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	02.27.20 18.33	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	02.27.20 18.33	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	02.27.20 18.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	73	%	70-135	02.27.20 18.33	
o-Terphenyl	84-15-1	73	%	70-135	02.27.20 18.33	

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Sample Id:	**FS17**	Matrix:	Soil	Date Received:	02.25.20 10.12
Lab Sample Id:	653577-014	Date Collected:	02.24.20 14.38	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	03.04.20 11.00	Basis:	Wet Weight
Seq Number:	3118602			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.04.20 20.46	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.04.20 20.46	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.04.20 20.46	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.04.20 20.46	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.04.20 20.46	U	1
Xylenes, Total	1330-20-7	<0.00201	0.00201	mg/kg	03.04.20 20.46	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.04.20 20.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	95	%	70-130	03.04.20 20.46	
1,4-Difluorobenzene	540-36-3	98	%	70-130	03.04.20 20.46	

Certificate of Analytical Results 653577

LT Environmental, Inc., Arvada, CO

RDX 28-24

Sample Id:	**FS18**	Matrix:	Soil	Date Received:	02.25.20 10.12
Lab Sample Id:	653577-015	Date Collected:	02.24.20 14.43	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.26.20 15.50	Basis:	Wet Weight
Seq Number:	3117800			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**18000**	252	mg/kg	02.26.20 18.00		50

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	02.27.20 12.00	Basis:	Wet Weight
Seq Number:	3118030			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	02.27.20 18.54	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	02.27.20 18.54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	02.27.20 18.54	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	02.27.20 18.54	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	02.27.20 18.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	74	%	70-135	02.27.20 18.54	
o-Terphenyl	84-15-1	77	%	70-135	02.27.20 18.54	

Certificate of Analytical Results 653577

LT Environmental, Inc., Arvada, CO

RDX 28-24

Sample Id:	**FS18**	Matrix:	Soil	Date Received:	02.25.20 10.12
Lab Sample Id:	653577-015	Date Collected:	02.24.20 14.43	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	03.02.20 08.00	Basis:	Wet Weight
Seq Number:	3118395			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	03.03.20 14.52	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	03.03.20 14.52	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	03.03.20 14.52	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	03.03.20 14.52	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	03.03.20 14.52	U	1
Xylenes, Total	1330-20-7	<0.00202	0.00202	mg/kg	03.03.20 14.52	U	1
Total BTEX		<0.00202	0.00202	mg/kg	03.03.20 14.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	89	%	70-130	03.03.20 14.52	
1,4-Difluorobenzene	540-36-3	103	%	70-130	03.03.20 14.52	

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LT Environmental, Inc., Arvada, CO

RDX 28-24

Sample Id:	**FS19**	Matrix:	Soil	Date Received:	02.25.20 10.12
Lab Sample Id:	653577-016	Date Collected:	02.24.20 15.08	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.26.20 15.50	Basis:	Wet Weight
Seq Number:	3117800			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**11600**	251	mg/kg	02.26.20 18.07		50

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	02.27.20 12.00	Basis:	Wet Weight
Seq Number:	3118030			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	02.27.20 19.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	02.27.20 19.15	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	02.27.20 19.15	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	02.27.20 19.15	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	02.27.20 19.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	74	%	70-135	02.27.20 19.15	
o-Terphenyl	84-15-1	75	%	70-135	02.27.20 19.15	

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LT Environmental, Inc., Arvada, CO

RDX 28-24

Sample Id:	**FS19**	Matrix:	Soil	Date Received:	02.25.20 10.12
Lab Sample Id:	653577-016	Date Collected:	02.24.20 15.08	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	03.02.20 08.00	Basis:	Wet Weight
Seq Number:	3118395			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.02.20 22.37	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.02.20 22.37	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.02.20 22.37	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.02.20 22.37	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.02.20 22.37	U	1
Xylenes, Total	1330-20-7	<0.00201	0.00201	mg/kg	03.02.20 22.37	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.02.20 22.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	03.02.20 22.37	
4-Bromofluorobenzene	460-00-4	92	%	70-130	03.02.20 22.37	

Certificate of Analytical Results 653577

LT Environmental, Inc., Arvada, CO

RDX 28-24

Sample Id:	**FS20**	Matrix:	Soil	Date Received:	02.25.20 10.12
Lab Sample Id:	653577-017	Date Collected:	02.24.20 15.12	Sample Depth:	0.3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.26.20 15.50	Basis:	Wet Weight
Seq Number:	3117800			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**13300**	99.6	mg/kg	02.26.20 18.25		20

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	02.27.20 12.00	Basis:	Wet Weight
Seq Number:	3118030			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	02.27.20 19.36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	02.27.20 19.36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	02.27.20 19.36	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	02.27.20 19.36	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	02.27.20 19.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	73	%	70-135	02.27.20 19.36	
o-Terphenyl	84-15-1	74	%	70-135	02.27.20 19.36	

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LT Environmental, Inc., Arvada, CO

RDX 28-24

Sample Id:	**FS20**	Matrix:	Soil	Date Received:	02.25.20 10.12
Lab Sample Id:	653577-017	Date Collected:	02.24.20 15.12	Sample Depth:	0.3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	03.02.20 08.00	Basis:	Wet Weight
Seq Number:	3118395			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.02.20 22.57	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.02.20 22.57	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.02.20 22.57	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.02.20 22.57	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.02.20 22.57	U	1
Xylenes, Total	1330-20-7	<0.00201	0.00201	mg/kg	03.02.20 22.57	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.02.20 22.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	84	%	70-130	03.02.20 22.57	
1,4-Difluorobenzene	540-36-3	103	%	70-130	03.02.20 22.57	

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LT Environmental, Inc., Arvada, CO

RDX 28-24

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	02.25.20 10.12
Lab Sample Id:	653577-018	Date Collected:	02.24.20 15.26	Sample Depth:	0.5 - 6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.26.20 15.50	Basis:	Wet Weight
Seq Number:	3117800			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**10300**	99.2	mg/kg	02.26.20 18.32		20

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	02.27.20 12.00	Basis:	Wet Weight
Seq Number:	3118030			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	02.27.20 19.57	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	02.27.20 19.57	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	02.27.20 19.57	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	02.27.20 19.57	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	02.27.20 19.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	72	%	70-135	02.27.20 19.57	
o-Terphenyl	84-15-1	73	%	70-135	02.27.20 19.57	

Certificate of Analytical Results 653577

LT Environmental, Inc., Arvada, CO

RDX 28-24

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	02.25.20 10.12
Lab Sample Id:	653577-018	Date Collected:	02.24.20 15.26	Sample Depth:	0.5 - 6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	03.02.20 08.00	Basis:	Wet Weight
Seq Number:	3118395			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.02.20 23.17	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.02.20 23.17	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.02.20 23.17	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	03.02.20 23.17	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.02.20 23.17	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	03.02.20 23.17	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.02.20 23.17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	92	%	70-130	03.02.20 23.17	
1,4-Difluorobenzene	540-36-3	105	%	70-130	03.02.20 23.17	

Certificate of Analytical Results 653577

LT Environmental, Inc., Arvada, CO

RDX 28-24

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	02.25.20 10.12
Lab Sample Id:	653577-019	Date Collected:	02.24.20 15.30	Sample Depth:	0.5 - 6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.26.20 15.50	Basis:	Wet Weight
Seq Number:	3117800			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**13300**	251	mg/kg	02.26.20 18.38		50

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	02.27.20 12.00	Basis:	Wet Weight
Seq Number:	3118030			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	02.27.20 20.18	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	02.27.20 20.18	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	02.27.20 20.18	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	02.27.20 20.18	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	02.27.20 20.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	78	%	70-135	02.27.20 20.18	
o-Terphenyl	84-15-1	75	%	70-135	02.27.20 20.18	

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LT Environmental, Inc., Arvada, CO

RDX 28-24

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	02.25.20 10.12
Lab Sample Id:	653577-019	Date Collected:	02.24.20 15.30	Sample Depth:	0.5 - 6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	03.02.20 08.00	Basis:	Wet Weight
Seq Number:	3118395			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.02.20 23.37	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.02.20 23.37	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.02.20 23.37	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.02.20 23.37	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.02.20 23.37	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	03.02.20 23.37	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.02.20 23.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106	%	70-130	03.02.20 23.37	
4-Bromofluorobenzene	460-00-4	84	%	70-130	03.02.20 23.37	

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 653577

LT Environmental, Inc.

RDX 28-24

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3117800 — Matrix: Solid — Date Prep: 02.26.20
MB Sample Id: 7697557-1-BLK — LCS Sample Id: 7697557-1-BKS — LCSD Sample Id: 7697557-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	254	102	254	102	90-110	0	20	mg/kg	02.26.20 16:02	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3117802 — Matrix: Solid — Date Prep: 02.26.20
MB Sample Id: 7697558-1-BLK — LCS Sample Id: 7697558-1-BKS — LCSD Sample Id: 7697558-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	252	101	252	101	90-110	0	20	mg/kg	02.26.20 16:20	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3117800 — Matrix: Soil — Date Prep: 02.26.20
Parent Sample Id: 653630-003 — MS Sample Id: 653630-003 S — MSD Sample Id: 653630-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	17.3	248	278	105	277	105	90-110	0	20	mg/kg	02.26.20 16:20	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3117800 — Matrix: Soil — Date Prep: 02.26.20
Parent Sample Id: 653630-004 — MS Sample Id: 653630-004 S — MSD Sample Id: 653630-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	48.5	249	311	105	311	105	90-110	0	20	mg/kg	02.26.20 17:48	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3117802 — Matrix: Soil — Date Prep: 02.26.20
Parent Sample Id: 653687-004 — MS Sample Id: 653687-004 S — MSD Sample Id: 653687-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	342	250	580	95	579	95	90-110	0	20	mg/kg	02.26.20 16:36	

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 653577

LT Environmental, Inc.

RDX 28-24

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3117802 — Matrix: Soil — Date Prep: 02.26.20
Parent Sample Id: 653745-002 — MS Sample Id: 653745-002 S — MSD Sample Id: 653745-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	297	250	538	96	539	97	90-110	0	20	mg/kg	02.26.20 17:49	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3118030 — Matrix: Solid — Date Prep: 02.27.20
MB Sample Id: 7697662-1-BLK — LCS Sample Id: 7697662-1-BKS — LCSD Sample Id: 7697662-1-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	2000	1670	84	1620	81	70-135	3	20	mg/kg	02.27.20 12:17	
Diesel Range Organics (DRO)	<15.0	2000	1790	90	1720	86	70-135	4	20	mg/kg	02.27.20 12:17	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	81		89		84		70-135	%	02.27.20 12:17
o-Terphenyl	81		87		82		70-135	%	02.27.20 12:17

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3118030 — Matrix: Solid — Date Prep: 02.27.20
MB Sample Id: 7697662-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	02.27.20 11:57	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3118030 — Matrix: Soil — Date Prep: 02.27.20
Parent Sample Id: 653577-001 — MS Sample Id: 653577-001 S — MSD Sample Id: 653577-001 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)	19.7	1990	1530	76	1540	76	70-135	1	20	mg/kg	02.27.20 13:20	
Diesel Range Organics (DRO)	22.6	1990	1540	76	1540	76	70-135	0	20	mg/kg	02.27.20 13:20	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	72		74		70-135	%	02.27.20 13:20
o-Terphenyl	74		73		70-135	%	02.27.20 13:20

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

QC Summary 653577

LT Environmental, Inc.

RDX 28-24

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3118395 — Matrix: Solid — Date Prep: 03.02.20
MB Sample Id: 7697961-1-BLK — LCS Sample Id: 7697961-1-BKS — LCSD Sample Id: 7697961-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000385	0.100	0.106	106	0.111	111	70-130	5	35	mg/kg	03.02.20 19:57	
Toluene	<0.000456	0.100	0.106	106	0.106	106	70-130	0	35	mg/kg	03.02.20 19:57	
Ethylbenzene	<0.000565	0.100	0.100	100	0.0991	99	70-130	1	35	mg/kg	03.02.20 19:57	
m,p-Xylenes	<0.00101	0.200	0.200	100	0.197	99	70-130	2	35	mg/kg	03.02.20 19:57	
o-Xylene	<0.000344	0.100	0.102	102	0.0999	100	70-130	2	35	mg/kg	03.02.20 19:57	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	94		102		104		70-130	%	03.02.20 19:57
4-Bromofluorobenzene	83		99		99		70-130	%	03.02.20 19:57

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3118399 — Matrix: Solid — Date Prep: 03.03.20
MB Sample Id: 7697975-1-BLK — LCS Sample Id: 7697975-1-BKS — LCSD Sample Id: 7697975-1-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	0.0968	97	0.0992	99	70-130	2	35	mg/kg	03.03.20 09:30	
Toluene	<0.00200	0.100	0.0988	99	0.0970	97	70-130	2	35	mg/kg	03.03.20 09:30	
Ethylbenzene	<0.00200	0.100	0.106	106	0.101	101	70-130	5	35	mg/kg	03.03.20 09:30	
m,p-Xylenes	<0.00400	0.200	0.209	105	0.198	99	70-130	5	35	mg/kg	03.03.20 09:30	
o-Xylene	<0.00200	0.100	0.105	105	0.0998	100	70-130	5	35	mg/kg	03.03.20 09:30	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	87		88		92		70-130	%	03.03.20 09:30
4-Bromofluorobenzene	106		107		107		70-130	%	03.03.20 09:30

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3118602 — Matrix: Solid — Date Prep: 03.04.20
MB Sample Id: 7698118-1-BLK — LCS Sample Id: 7698118-1-BKS — LCSD Sample Id: 7698118-1-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	0.0961	96	0.0955	96	70-130	1	35	mg/kg	03.04.20 12:47	
Toluene	<0.00200	0.100	0.0944	94	0.0945	95	70-130	0	35	mg/kg	03.04.20 12:47	
Ethylbenzene	<0.00200	0.100	0.0981	98	0.0987	99	70-130	1	35	mg/kg	03.04.20 12:47	
m,p-Xylenes	<0.00400	0.200	0.190	95	0.193	97	70-130	2	35	mg/kg	03.04.20 12:47	
o-Xylene	<0.00200	0.100	0.0955	96	0.0972	97	70-130	2	35	mg/kg	03.04.20 12:47	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	91		90		91		70-130	%	03.04.20 12:47
4-Bromofluorobenzene	112		100		104		70-130	%	03.04.20 12:47

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 653577

LT Environmental, Inc.

RDX 28-24

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3118395 — Matrix: Soil — Date Prep: 03.02.20
Parent Sample Id: 653630-006 — MS Sample Id: 653630-006 S — MSD Sample Id: 653630-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000384	0.0998	0.0820	82	0.0764	77	70-130	7	35	mg/kg	03.02.20 20:38	
Toluene	<0.000455	0.0998	0.0620	62	0.0494	50	70-130	23	35	mg/kg	03.02.20 20:38	X
Ethylbenzene	<0.000564	0.0998	0.0669	67	0.0543	55	70-130	21	35	mg/kg	03.02.20 20:38	X
m,p-Xylenes	<0.00101	0.200	0.126	63	0.100	50	70-130	23	35	mg/kg	03.02.20 20:38	X
o-Xylene	<0.000344	0.0998	0.0832	83	0.0720	72	70-130	14	35	mg/kg	03.02.20 20:38	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		105		70-130	%	03.02.20 20:38
4-Bromofluorobenzene	95		94		70-130	%	03.02.20 20:38

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3118399 — Matrix: Soil — Date Prep: 03.03.20
Parent Sample Id: 653577-005 — MS Sample Id: 653577-005 S — MSD Sample Id: 653577-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.0955	96	0.0933	94	70-130	2	35	mg/kg	03.03.20 10:11	
Toluene	<0.00199	0.0996	0.0931	93	0.0904	91	70-130	3	35	mg/kg	03.03.20 10:11	
Ethylbenzene	<0.00199	0.0996	0.0969	97	0.0945	95	70-130	3	35	mg/kg	03.03.20 10:11	
m,p-Xylenes	<0.00398	0.199	0.191	96	0.185	93	70-130	3	35	mg/kg	03.03.20 10:11	
o-Xylene	<0.00199	0.0996	0.0966	97	0.0937	94	70-130	3	35	mg/kg	03.03.20 10:11	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	92		92		70-130	%	03.03.20 10:11
4-Bromofluorobenzene	110		110		70-130	%	03.03.20 10:11

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3118602 — Matrix: Soil — Date Prep: 03.04.20
Parent Sample Id: 653577-001 — MS Sample Id: 653577-001 S — MSD Sample Id: 653577-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.0956	95	0.0937	93	70-130	2	35	mg/kg	03.04.20 13:28	
Toluene	<0.00202	0.101	0.0905	90	0.0899	89	70-130	1	35	mg/kg	03.04.20 13:28	
Ethylbenzene	<0.00202	0.101	0.0907	90	0.0914	90	70-130	1	35	mg/kg	03.04.20 13:28	
m,p-Xylenes	<0.00404	0.202	0.173	86	0.176	87	70-130	2	35	mg/kg	03.04.20 13:28	
o-Xylene	<0.00202	0.101	0.0875	87	0.0888	88	70-130	1	35	mg/kg	03.04.20 13:28	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	94		93		70-130	%	03.04.20 13:28
4-Bromofluorobenzene	97		99		70-130	%	03.04.20 13:28

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

Chain of Custody

Work Order No: 653577

XENCO LABORATORIES

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

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Project Manager:	Chris Mckisson	Bill to: (if different)	Chris Mckisson
Company Name:	LT Environmental, Inc.,	Company Name:	LT Environmental
Address:	820 Megan Ave, Unit B	Address:	
City, State ZIP:	Rifle, CO 81650	City, State ZIP:	
Phone:	970-285-9985	Email:	Jhill@ltenv.com, cmckisson@ltenv.com

Work Order Comments

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

Project Name:	ROX 28-24	Turn Around	
Project Number:	03482000 3	Routine	☑
P.O. Number:	spill date 1/12/20	Rush:	
Sampler's Name:	Jeremy Hill	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	Yes No	
Temperature (°C):	2.8 S.C.	Thermometer ID	T-NM-007	
Received Intact:	Yes No			
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No N/A	Total Containers:	19	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)	Sample Comments
FS01	s	2/24/20	0.3'	1201	1	X	X	X	composite
FS02	s		0.3'	1207					
FS03	s		0.5'	1213					
FS07	s		0.3'	1311					
FS08	s		0.3'	1315					
FS09	s		0.5'	1321					
FS10	s		0.3'	1326					
FS11	s		6.0'	1332					
FS12	s		2.0'	1336					
FS13	s		0.3'	1418					

ANALYSIS REQUEST

Work Order Notes

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

Sample Comments

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
	Anna Byers	2/25/20 1000	2 Anna Byers		2/25/20 10:12
			4		
			6		

Revised Date 051418 Rev. 2018.1

XENCO LABORATORIES

Chain of Custody

Work Order No: 653577

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

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Project Manager:	Chris Mckisson	Bill to: (if different)	Chris Mckisson
Company Name:	LT Environmental, Inc.,	Company Name:	LT Environmental
Address:	820 Megan Ave, Unit B	Address:	
City, State ZIP:	Rifle, CO 81650	City, State ZIP:	
Phone:	970-285-9985	Email:	Jhill@ltenv.com, cmckisson@ltenv.com

Work Order Comments

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

Project Name:	ROX-28-24	Turn Around	
Project Number:	~~02034820003~~ 034820003	Routine	☑
P.O. Number:	Spill date 1/12/20	Rush:	
Sampler's Name:	Jeremy Hill	Due Date:	

SAMPLE RECEIPT	Temp Blank: Yes No	Wet Ice:	(Yes) No
Temperature (°C):	2.8 ~~5.6~~	Thermometer ID	
Received Intact:	Yes No		
Cooler Custody Seals:	Yes ~~No~~ N/A	Correction Factor:	
Sample Custody Seals:	Yes No N/A	Total Containers:	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)	Sample Comments
FS14	s	2/24/20	1424	0.5'	1	X	X	X	composite
FS15	s	↓	1429	0.5'	↓	↓	↓	↓	↓
FS16	s	↓	1434	0.3'	↓	↓	↓	↓	↓
FS17	s	↓	1438	0.5'	↓	↓	↓	↓	↓
FS18	s	↓	1443	0.5'	↓	↓	↓	↓	↓
FS19	s	↓	1508	0.5'	↓	↓	↓	↓	↓
FS20	s	↓	1512	0.3'	↓	↓	↓	↓	↓
SW03	s	↓	1526	0.5-6'	↓	↓	↓	↓	↓
SW04	s	↓	1530	0.56'	↓	↓	↓	↓	↓
	s								

Work Order Notes

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

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 [signature]	Anna Byers	2/25/20 10:00	2 Anna Byers	[signature]	2/25/20 10:12
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

Inter-Office Shipment

IOS Number **58886**

Date/Time: 02/25/20 11:34
Lab# From: **Carlsbad**
Lab# To: **Midland**

Created by: Elizabeth Mcclellan
Delivery Priority:
Air Bill No.: 777860524719

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

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
653577-001	S	FS01	02/24/20 12:01	SW8021B	BTEX by EPA 8021B	03/02/20	03/09/20	JKR	BZ BZME EBZ XYLENES	
653577-001	S	FS01	02/24/20 12:01	SW8015MOD_NM	TPH by SW8015 Mod	03/02/20	03/09/20	JKR	GRO-DRO PHCC10C28 PI	
653577-001	S	FS01	02/24/20 12:01	E300_CL	Chloride by EPA 300	03/02/20	03/23/20	JKR	CL	
653577-002	S	FS02	02/24/20 12:07	SW8015MOD_NM	TPH by SW8015 Mod	03/02/20	03/09/20	JKR	GRO-DRO PHCC10C28 PI	
653577-002	S	FS02	02/24/20 12:07	E300_CL	Chloride by EPA 300	03/02/20	03/23/20	JKR	CL	
653577-002	S	FS02	02/24/20 12:07	SW8021B	BTEX by EPA 8021B	03/02/20	03/09/20	JKR	BZ BZME EBZ XYLENES	
653577-003	S	FS03	02/24/20 12:13	SW8015MOD_NM	TPH by SW8015 Mod	03/02/20	03/09/20	JKR	GRO-DRO PHCC10C28 PI	
653577-003	S	FS03	02/24/20 12:13	SW8021B	BTEX by EPA 8021B	03/02/20	03/09/20	JKR	BZ BZME EBZ XYLENES	
653577-003	S	FS03	02/24/20 12:13	E300_CL	Chloride by EPA 300	03/02/20	03/23/20	JKR	CL	
653577-004	S	FS07	02/24/20 13:11	E300_CL	Chloride by EPA 300	03/02/20	03/23/20	JKR	CL	
653577-004	S	FS07	02/24/20 13:11	SW8021B	BTEX by EPA 8021B	03/02/20	03/09/20	JKR	BZ BZME EBZ XYLENES	
653577-004	S	FS07	02/24/20 13:11	SW8015MOD_NM	TPH by SW8015 Mod	03/02/20	03/09/20	JKR	GRO-DRO PHCC10C28 PI	
653577-005	S	FS08	02/24/20 13:15	E300_CL	Chloride by EPA 300	03/02/20	03/23/20	JKR	CL	
653577-005	S	FS08	02/24/20 13:15	SW8015MOD_NM	TPH by SW8015 Mod	03/02/20	03/09/20	JKR	GRO-DRO PHCC10C28 PI	
653577-005	S	FS08	02/24/20 13:15	SW8021B	BTEX by EPA 8021B	03/02/20	03/09/20	JKR	BZ BZME EBZ XYLENES	
653577-006	S	FS09	02/24/20 13:21	E300_CL	Chloride by EPA 300	03/02/20	03/23/20	JKR	CL	
653577-006	S	FS09	02/24/20 13:21	SW8015MOD_NM	TPH by SW8015 Mod	03/02/20	03/09/20	JKR	GRO-DRO PHCC10C28 PI	
653577-006	S	FS09	02/24/20 13:21	SW8021B	BTEX by EPA 8021B	03/02/20	03/09/20	JKR	BZ BZME EBZ XYLENES	
653577-007	S	FS10	02/24/20 13:26	SW8015MOD_NM	TPH by SW8015 Mod	03/02/20	03/09/20	JKR	GRO-DRO PHCC10C28 PI	
653577-007	S	FS10	02/24/20 13:26	SW8021B	BTEX by EPA 8021B	03/02/20	03/09/20	JKR	BZ BZME EBZ XYLENES	
653577-007	S	FS10	02/24/20 13:26	E300_CL	Chloride by EPA 300	03/02/20	03/23/20	JKR	CL	
653577-008	S	FS11	02/24/20 13:32	E300_CL	Chloride by EPA 300	03/02/20	03/23/20	JKR	CL	
653577-008	S	FS11	02/24/20 13:32	SW8015MOD_NM	TPH by SW8015 Mod	03/02/20	03/09/20	JKR	GRO-DRO PHCC10C28 PI	
653577-008	S	FS11	02/24/20 13:32	SW8021B	BTEX by EPA 8021B	03/02/20	03/09/20	JKR	BZ BZME EBZ XYLENES	
653577-009	S	FS12	02/24/20 13:36	SW8015MOD_NM	TPH by SW8015 Mod	03/02/20	03/09/20	JKR	GRO-DRO PHCC10C28 PI	

Inter-Office Shipment

IOS Number **58886**

Date/Time: 02/25/20 11:34
Created by: Elizabeth Mcclellan
Please send report to: Jessica Kramer

Lab# From: **Carlsbad**
Delivery Priority:
Address: 1089 N Canal Street

Lab# To: **Midland**
Air Bill No.: 777860524719
E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
653577-009	S	FS12	02/24/20 13:36	SW8021B	BTEX by EPA 8021B	03/02/20	03/09/20	JKR	BZ BZME EBZ XYLENES	
653577-009	S	FS12	02/24/20 13:36	E300_CL	Chloride by EPA 300	03/02/20	03/23/20	JKR	CL	
653577-010	S	FS13	02/24/20 14:18	E300_CL	Chloride by EPA 300	03/02/20	03/23/20	JKR	CL	
653577-010	S	FS13	02/24/20 14:18	SW8021B	BTEX by EPA 8021B	03/02/20	03/09/20	JKR	BZ BZME EBZ XYLENES	
653577-010	S	FS13	02/24/20 14:18	SW8015MOD_NM	TPH by SW8015 Mod	03/02/20	03/09/20	JKR	GRO-DRO PHCC10C28 PI	
653577-011	S	FS14	02/24/20 14:24	SW8021B	BTEX by EPA 8021B	03/02/20	03/09/20	JKR	BZ BZME EBZ XYLENES	
653577-011	S	FS14	02/24/20 14:24	SW8015MOD_NM	TPH by SW8015 Mod	03/02/20	03/09/20	JKR	GRO-DRO PHCC10C28 PI	
653577-011	S	FS14	02/24/20 14:24	E300_CL	Chloride by EPA 300	03/02/20	03/23/20	JKR	CL	
653577-012	S	FS15	02/24/20 14:29	SW8015MOD_NM	TPH by SW8015 Mod	03/02/20	03/09/20	JKR	GRO-DRO PHCC10C28 PI	
653577-012	S	FS15	02/24/20 14:29	E300_CL	Chloride by EPA 300	03/02/20	03/23/20	JKR	CL	
653577-012	S	FS15	02/24/20 14:29	SW8021B	BTEX by EPA 8021B	03/02/20	03/09/20	JKR	BZ BZME EBZ XYLENES	
653577-013	S	FS16	02/24/20 14:34	SW8015MOD_NM	TPH by SW8015 Mod	03/02/20	03/09/20	JKR	GRO-DRO PHCC10C28 PI	
653577-013	S	FS16	02/24/20 14:34	E300_CL	Chloride by EPA 300	03/02/20	03/23/20	JKR	CL	
653577-013	S	FS16	02/24/20 14:34	SW8021B	BTEX by EPA 8021B	03/02/20	03/09/20	JKR	BZ BZME EBZ XYLENES	
653577-014	S	FS17	02/24/20 14:38	SW8021B	BTEX by EPA 8021B	03/02/20	03/09/20	JKR	BZ BZME EBZ XYLENES	
653577-014	S	FS17	02/24/20 14:38	E300_CL	Chloride by EPA 300	03/02/20	03/23/20	JKR	CL	
653577-014	S	FS17	02/24/20 14:38	SW8015MOD_NM	TPH by SW8015 Mod	03/02/20	03/09/20	JKR	GRO-DRO PHCC10C28 PI	
653577-015	S	FS18	02/24/20 14:43	E300_CL	Chloride by EPA 300	03/02/20	03/23/20	JKR	CL	
653577-015	S	FS18	02/24/20 14:43	SW8021B	BTEX by EPA 8021B	03/02/20	03/09/20	JKR	BZ BZME EBZ XYLENES	
653577-015	S	FS18	02/24/20 14:43	SW8015MOD_NM	TPH by SW8015 Mod	03/02/20	03/09/20	JKR	GRO-DRO PHCC10C28 PI	
653577-016	S	FS19	02/24/20 15:08	SW8021B	BTEX by EPA 8021B	03/02/20	03/09/20	JKR	BZ BZME EBZ XYLENES	
653577-016	S	FS19	02/24/20 15:08	E300_CL	Chloride by EPA 300	03/02/20	03/23/20	JKR	CL	
653577-016	S	FS19	02/24/20 15:08	SW8015MOD_NM	TPH by SW8015 Mod	03/02/20	03/09/20	JKR	GRO-DRO PHCC10C28 PI	
653577-017	S	FS20	02/24/20 15:12	SW8015MOD_NM	TPH by SW8015 Mod	03/02/20	03/09/20	JKR	GRO-DRO PHCC10C28 PI	
653577-017	S	FS20	02/24/20 15:12	SW8021B	BTEX by EPA 8021B	03/02/20	03/09/20	JKR	BZ BZME EBZ XYLENES	

Inter Office Shipment or Sample Comments:

Inter-Office Shipment

IOS Number **58886**

Date/Time: 02/25/20 11:34
Lab# From: **Carlsbad**
Lab# To: **Midland**

Created by: Elizabeth Mcclellan
Delivery Priority:
Air Bill No.: 777860524719

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

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
653577-017	S	FS20	02/24/20 15:12	E300_CL	Chloride by EPA 300	03/02/20	03/23/20	JKR	CL	
653577-018	S	SW03	02/24/20 15:26	E300_CL	Chloride by EPA 300	03/02/20	03/23/20	JKR	CL	
653577-018	S	SW03	02/24/20 15:26	SW8021B	BTEX by EPA 8021B	03/02/20	03/09/20	JKR	BZ BZME EBZ XYLENES	
653577-018	S	SW03	02/24/20 15:26	SW8015MOD_NM	TPH by SW8015 Mod	03/02/20	03/09/20	JKR	GRO-DRO PHCC10C28 PI	
653577-019	S	SW04	02/24/20 15:30	E300_CL	Chloride by EPA 300	03/02/20	03/23/20	JKR	CL	
653577-019	S	SW04	02/24/20 15:30	SW8021B	BTEX by EPA 8021B	03/02/20	03/09/20	JKR	BZ BZME EBZ XYLENES	
653577-019	S	SW04	02/24/20 15:30	SW8015MOD_NM	TPH by SW8015 Mod	03/02/20	03/09/20	JKR	GRO-DRO PHCC10C28 PI	

Inter Office Shipment or Sample Comments:

Relinquished By: Elizabeth McClellan
Date Relinquished: 02/25/2020

Received By: Brianna Teel
Date Received: 02/26/2020 11:51
Cooler Temperature: 0.5

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 58886

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

Sent By: Elizabeth McClellan **Date Sent:** 02/25/2020 11:34 AM

Received By: Brianna Teel **Date Received:** 02/26/2020 11:51 AM

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

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

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

Checklist reviewed by: Brianna Teel Date: 02/26/2020

Brianna Teel

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 02.25.2020 10.12.00 AM

Work Order #: 653577

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

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	2.8	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**	
#5 Custody Seals intact on sample bottles?	**Yes**	
#6*Custody Seals Signed and dated?	**Yes**	
#7 *Chain of Custody present?	**Yes**	
#8 Any missing/extra samples?	**No**	
#9 Chain of Custody signed when relinquished/ received?	**Yes**	
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**	
#11 Container label(s) legible and intact?	**Yes**	
#12 Samples in proper container/ bottle?	**Yes**	
#13 Samples properly preserved?	**Yes**	
#14 Sample container(s) intact?	**Yes**	
#15 Sufficient sample amount for indicated test(s)?	**Yes**	
#16 All samples received within hold time?	**Yes**	
#17 Subcontract of sample(s)?	**Yes**	Subbed to Midland.
#18 Water VOC samples have zero headspace?	**N/A**	

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

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 02.25.2020

Checklist reviewed by: Jessica Kramer Date: 02.26.2020

Jessica Kramer

Analytical Report 654253

for

LT Environmental, Inc.

Project Manager: Chris McKisson

RDX Fed 28-24

034820003

12-MAR-20

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

12-MAR-20

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

Reference: XENCO Report No(s): **654253**
RDX Fed 28-24
Project Address:

Chris McKisson:

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) 654253. 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. 654253 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Manager

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 654253

LT Environmental, Inc., Arvada, CO

RDX Fed 28-24

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW02	S	02-28-20 10:44	0.3 - 3 ft	654253-001
FS06	S	02-28-20 11:36	0.5 - 1.0 ft	654253-002
FS05	S	02-28-20 12:02	0.5 - 1.0 ft	654253-003
FS04	S	02-28-20 12:22	0.3 - 1.0 ft	654253-004
SW01	S	02-28-20 13:55	0.3 - 3 ft	654253-005
FS08A	S	02-28-20 14:47	0.5 ft	Not Analyzed
FS15A	S	02-28-20 15:14	0.8 ft	Not Analyzed
FS18A	S	02-28-20 15:17	0.8 ft	Not Analyzed

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: RDX Fed 28-24

Project ID: *034820003*
Work Order Number(s): *654253*

Report Date: *12-MAR-20*
Date Received: *03/02/2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3119095 BTEX by EPA 8021B

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

Certificate of Analysis Summary 654253

LT Environmental, Inc., Arvada, CO

Project Name: RDX Fed 28-24

Project Id: 034820003
Contact: Chris McKisson
Project Location:

Date Received in Lab: Mon Mar-02-20 12:10 pm
Report Date: 12-MAR-20
Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	654253-001		654253-002		654253-003		654253-004		654253-005	
	Field Id:	SW02		FS06		FS05		FS04		SW01	
	Depth:	0.3-3 ft		0.5-1.0 ft		0.5-1.0 ft		0.3-1.0 ft		0.3-3 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Feb-28-20 10:44		Feb-28-20 11:36		Feb-28-20 12:02		Feb-28-20 12:22		Feb-28-20 13:55	
BTEX by EPA 8021B SUB: T104704400-19-19	***Extracted:***	Mar-10-20 08:00		Mar-10-20 08:00		Mar-10-20 08:00		Mar-10-20 08:00		Mar-10-20 08:00	
	Analyzed:	Mar-10-20 18:06		Mar-10-20 18:26		Mar-10-20 18:47		Mar-10-20 19:07		Mar-10-20 19:27	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200
Toluene		<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200
Ethylbenzene		<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200
m,p-Xylenes		<0.00403	0.00403	<0.00401	0.00401	<0.00402	0.00402	<0.00398	0.00398	<0.00399	0.00399
o-Xylene		<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200
Xylenes, Total		<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200
Total BTEX		<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200
Chloride by EPA 300 SUB: T104704400-19-19	***Extracted:***	Mar-03-20 17:00		Mar-03-20 17:00		Mar-03-20 17:00		Mar-03-20 17:00		Mar-03-20 17:00	
	Analyzed:	Mar-03-20 21:57		Mar-03-20 22:02		Mar-03-20 22:08		Mar-03-20 22:29		Mar-03-20 22:34	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		3330	100	10300	250	5150	100	5210	99.0	3690	99.4
TPH by SW8015 Mod SUB: T104704400-19-19	***Extracted:***	Mar-03-20 11:00		Mar-03-20 11:00		Mar-03-20 11:00		Mar-03-20 11:00		Mar-03-20 11:00	
	Analyzed:	Mar-03-20 13:23		Mar-03-20 14:19		Mar-03-20 14:37		Mar-03-20 14:56		Mar-03-20 15:15	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0	<50.0	50.0	<49.8	49.8	<50.0	50.0	<50.0	50.0
Diesel Range Organics (DRO)		<50.0	50.0	<50.0	50.0	<49.8	49.8	<50.0	50.0	<50.0	50.0
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<50.0	50.0	<49.8	49.8	<50.0	50.0	<50.0	50.0
Total GRO-DRO		<50.0	50.0	<50.0	50.0	<49.8	49.8	<50.0	50.0	<50.0	50.0
Total TPH		<50.0	50.0	<50.0	50.0	<49.8	49.8	<50.0	50.0	<50.0	50.0

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

Version: 1.%

Jessica Kramer
Project Manager

Certificate of Analytical Results 654253

LT Environmental, Inc., Arvada, CO

RDX Fed 28-24

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	03.02.20 12.10
Lab Sample Id:	654253-001	Date Collected:	02.28.20 10.44	Sample Depth:	0.3 - 3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.03.20 17.00	Basis:	Wet Weight
Seq Number:	3118432			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**3330**	100	mg/kg	03.03.20 21.57		20

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.03.20 11.00	Basis:	Wet Weight
Seq Number:	3118479			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.03.20 13.23	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	03.03.20 13.23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.03.20 13.23	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	03.03.20 13.23	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	03.03.20 13.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	03.03.20 13.23	
o-Terphenyl	84-15-1	92	%	70-135	03.03.20 13.23	

Certificate of Analytical Results 654253

LT Environmental, Inc., Arvada, CO

RDX Fed 28-24

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	03.02.20 12.10
Lab Sample Id:	654253-001	Date Collected:	02.28.20 10.44	Sample Depth:	0.3 - 3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	03.10.20 08.00	Basis:	Wet Weight
Seq Number:	3119095			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	03.10.20 18.06	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	03.10.20 18.06	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	03.10.20 18.06	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	03.10.20 18.06	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	03.10.20 18.06	U	1
Xylenes, Total	1330-20-7	<0.00202	0.00202	mg/kg	03.10.20 18.06	U	1
Total BTEX		<0.00202	0.00202	mg/kg	03.10.20 18.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	81	%	70-130	03.10.20 18.06	
1,4-Difluorobenzene	540-36-3	100	%	70-130	03.10.20 18.06	

Certificate of Analytical Results 654253

LT Environmental, Inc., Arvada, CO

RDX Fed 28-24

Sample Id:	**FS06**	Matrix:	Soil	Date Received:	03.02.20 12.10
Lab Sample Id:	654253-002	Date Collected:	02.28.20 11.36	Sample Depth:	0.5 - 1.0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.03.20 17.00	Basis:	Wet Weight
Seq Number:	3118432			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**10300**	250	mg/kg	03.03.20 22.02		50

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.03.20 11.00	Basis:	Wet Weight
Seq Number:	3118479			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.03.20 14.19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	03.03.20 14.19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.03.20 14.19	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	03.03.20 14.19	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	03.03.20 14.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	03.03.20 14.19	
o-Terphenyl	84-15-1	88	%	70-135	03.03.20 14.19	

Certificate of Analytical Results 654253

LT Environmental, Inc., Arvada, CO

RDX Fed 28-24

Sample Id:	**FS06**	Matrix:	Soil	Date Received:	03.02.20 12.10
Lab Sample Id:	654253-002	Date Collected:	02.28.20 11.36	Sample Depth:	0.5 - 1.0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	03.10.20 08.00	Basis:	Wet Weight
Seq Number:	3119095			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.10.20 18.26	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.10.20 18.26	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.10.20 18.26	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	03.10.20 18.26	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.10.20 18.26	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	03.10.20 18.26	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.10.20 18.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	03.10.20 18.26	
4-Bromofluorobenzene	460-00-4	97	%	70-130	03.10.20 18.26	

Certificate of Analytical Results 654253

LT Environmental, Inc., Arvada, CO

RDX Fed 28-24

Sample Id:	**FS05**	Matrix:	Soil	Date Received:	03.02.20 12.10
Lab Sample Id:	654253-003	Date Collected:	02.28.20 12.02	Sample Depth:	0.5 - 1.0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.03.20 17.00	Basis:	Wet Weight
Seq Number:	3118432			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**5150**	100	mg/kg	03.03.20 22.08		20

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.03.20 11.00	Basis:	Wet Weight
Seq Number:	3118479			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	03.03.20 14.37	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	03.03.20 14.37	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	03.03.20 14.37	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	03.03.20 14.37	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	03.03.20 14.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	03.03.20 14.37	
o-Terphenyl	84-15-1	88	%	70-135	03.03.20 14.37	

Certificate of Analytical Results 654253

LT Environmental, Inc., Arvada, CO

RDX Fed 28-24

Sample Id:	**FS05**	Matrix:	Soil	Date Received:	03.02.20 12.10
Lab Sample Id:	654253-003	Date Collected:	02.28.20 12.02	Sample Depth:	0.5 - 1.0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	03.10.20 08.00	Basis:	Wet Weight
Seq Number:	3119095			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.10.20 18.47	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.10.20 18.47	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.10.20 18.47	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.10.20 18.47	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.10.20 18.47	U	1
Xylenes, Total	1330-20-7	<0.00201	0.00201	mg/kg	03.10.20 18.47	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.10.20 18.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	70-130	03.10.20 18.47	
1,4-Difluorobenzene	540-36-3	104	%	70-130	03.10.20 18.47	

Certificate of Analytical Results 654253

LT Environmental, Inc., Arvada, CO

RDX Fed 28-24

Sample Id:	**FS04**	Matrix:	Soil	Date Received:	03.02.20 12.10
Lab Sample Id:	654253-004	Date Collected:	02.28.20 12.22	Sample Depth:	0.3 - 1.0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.03.20 17.00	Basis:	Wet Weight
Seq Number:	3118432			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**5210**	99.0	mg/kg	03.03.20 22.29		20

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.03.20 11.00	Basis:	Wet Weight
Seq Number:	3118479			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.03.20 14.56	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	03.03.20 14.56	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.03.20 14.56	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	03.03.20 14.56	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	03.03.20 14.56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	03.03.20 14.56	
o-Terphenyl	84-15-1	89	%	70-135	03.03.20 14.56	

Certificate of Analytical Results 654253

LT Environmental, Inc., Arvada, CO

RDX Fed 28-24

Sample Id:	**FS04**	Matrix:	Soil	Date Received:	03.02.20 12.10
Lab Sample Id:	654253-004	Date Collected:	02.28.20 12.22	Sample Depth:	0.3 - 1.0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	03.10.20 08.00	Basis:	Wet Weight
Seq Number:	3119095			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.10.20 19.07	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.10.20 19.07	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.10.20 19.07	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.10.20 19.07	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.10.20 19.07	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	03.10.20 19.07	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.10.20 19.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	94	%	70-130	03.10.20 19.07	
1,4-Difluorobenzene	540-36-3	107	%	70-130	03.10.20 19.07	

Certificate of Analytical Results 654253

LT Environmental, Inc., Arvada, CO

RDX Fed 28-24

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	03.02.20 12.10
Lab Sample Id:	654253-005	Date Collected:	02.28.20 13.55	Sample Depth:	0.3 - 3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.03.20 17.00	Basis:	Wet Weight
Seq Number:	3118432			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**3690**	99.4	mg/kg	03.03.20 22.34		20

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.03.20 11.00	Basis:	Wet Weight
Seq Number:	3118479			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.03.20 15.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	03.03.20 15.15	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.03.20 15.15	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	03.03.20 15.15	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	03.03.20 15.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	03.03.20 15.15	
o-Terphenyl	84-15-1	89	%	70-135	03.03.20 15.15	

Certificate of Analytical Results 654253

LT Environmental, Inc., Arvada, CO

RDX Fed 28-24

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	03.02.20 12.10
Lab Sample Id:	654253-005	Date Collected:	02.28.20 13.55	Sample Depth:	0.3 - 3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	03.10.20 08.00	Basis:	Wet Weight
Seq Number:	3119095			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.10.20 19.27	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.10.20 19.27	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.10.20 19.27	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	03.10.20 19.27	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.10.20 19.27	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	03.10.20 19.27	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.10.20 19.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	03.10.20 19.27	
4-Bromofluorobenzene	460-00-4	96	%	70-130	03.10.20 19.27	

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 654253

LT Environmental, Inc.

RDX Fed 28-24

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3118432 — Matrix: Solid — Date Prep: 03.03.20
MB Sample Id: 7698002-1-BLK — LCS Sample Id: 7698002-1-BKS — LCSD Sample Id: 7698002-1-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	245	98	244	98	90-110	0	20	mg/kg	03.03.20 20:49	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3118432 — Matrix: Soil — Date Prep: 03.03.20
Parent Sample Id: 654318-001 — MS Sample Id: 654318-001 S — MSD Sample Id: 654318-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	109	249	348	96	350	97	90-110	1	20	mg/kg	03.03.20 21:05	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3118432 — Matrix: Soil — Date Prep: 03.03.20
Parent Sample Id: 654318-007 — MS Sample Id: 654318-007 S — MSD Sample Id: 654318-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	243	252	488	97	487	97	90-110	0	20	mg/kg	03.03.20 22:18	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3118479 — Matrix: Solid — Date Prep: 03.03.20
MB Sample Id: 7697987-1-BLK — LCS Sample Id: 7697987-1-BKS — LCSD Sample Id: 7697987-1-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	945	95	938	94	70-135	1	20	mg/kg	03.03.20 12:45	
Diesel Range Organics (DRO)	<15.0	1000	1050	105	1040	104	70-135	1	20	mg/kg	03.03.20 12:45	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	95		107		112		70-135	%	03.03.20 12:45
o-Terphenyl	99		103		104		70-135	%	03.03.20 12:45

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3118479 — Matrix: Solid — Date Prep: 03.03.20
MB Sample Id: 7697987-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	03.03.20 12:26	

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 654253

LT Environmental, Inc.

RDX Fed 28-24

Analytical Method: TPH by SW8015 Mod | Prep Method: SW8015P
Seq Number: 3118479 | Matrix: Soil | Date Prep: 03.03.20
Parent Sample Id: 654253-001 | MS Sample Id: 654253-001 S | MSD Sample Id: 654253-001 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	997	856	86	866	87	70-135	1	20	mg/kg	03.03.20 13:41	
Diesel Range Organics (DRO)	<15.0	997	945	95	963	96	70-135	2	20	mg/kg	03.03.20 13:41	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	109		101		70-135	%	03.03.20 13:41
o-Terphenyl	98		99		70-135	%	03.03.20 13:41

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3119095 | Matrix: Solid | Date Prep: 03.10.20
MB Sample Id: 7698506-1-BLK | LCS Sample Id: 7698506-1-BKS | LCSD Sample Id: 7698506-1-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	0.0998	0.113	113	0.104	104	70-130	8	35	mg/kg	03.10.20 08:42	
Toluene	<0.00200	0.0998	0.117	117	0.104	104	70-130	12	35	mg/kg	03.10.20 08:42	
Ethylbenzene	<0.00200	0.0998	0.114	114	0.100	100	70-130	13	35	mg/kg	03.10.20 08:42	
m,p-Xylenes	<0.00101	0.200	0.224	112	0.197	99	70-130	13	35	mg/kg	03.10.20 08:42	
o-Xylene	<0.00200	0.0998	0.109	109	0.0989	99	70-130	10	35	mg/kg	03.10.20 08:42	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	96		104		103		70-130	%	03.10.20 08:42
4-Bromofluorobenzene	84		102		96		70-130	%	03.10.20 08:42

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3119095 | Matrix: Soil | Date Prep: 03.10.20
Parent Sample Id: 654948-001 | MS Sample Id: 654948-001 S | MSD Sample Id: 654948-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	0.000615	0.100	0.116	115	0.112	111	70-130	4	35	mg/kg	03.10.20 09:22	
Toluene	0.00626	0.100	0.103	97	0.0961	90	70-130	7	35	mg/kg	03.10.20 09:22	
Ethylbenzene	0.00203	0.100	0.0822	80	0.0761	74	70-130	8	35	mg/kg	03.10.20 09:22	
m,p-Xylenes	0.00762	0.200	0.163	78	0.149	70	70-130	9	35	mg/kg	03.10.20 09:22	
o-Xylene	0.00446	0.100	0.0807	76	0.0752	71	70-130	7	35	mg/kg	03.10.20 09:22	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	109		109		70-130	%	03.10.20 09:22
4-Bromofluorobenzene	98		97		70-130	%	03.10.20 09:22

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

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]
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

Final 1.000

Chain of Custody

Work Order No: 605453

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

Project Manager:	Chris Mckisson	Bill to: (if different)	Chris Mckisson
Company Name:	LT Environmental, Inc.,	Company Name:	LT Environmental
Address:	820 Megan Ave, Unit B	~~Address:~~	
City, State ZIP:	Rifle, CO 81650	~~City, State ZIP:~~	
Phone:	970-285-9985	Email:	Jhill@ltenv.com, cmckisson@ltenv.com

Work Order Comments

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

Project Name:	RDX Fed 28-24	Turn Around	
Project Number:	034820003	Routine	X
P.O. Number:		Rush:	
Sampler's Name:	Jeremy Hill	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes / No	Wet Ice:	Yes / No
Temperature (°C):	3.8	Thermometer ID	T-NM-007
Received Intact:	Yes / No		
Cooler Custody Seals:	Yes / No / N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes / No / N/A	Total Containers:	8

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)	Work Order Notes / Sample Comments
SW02	s	2/28/20	1044	0.3-3'	1	X	X	X	Composite
FS06	s		1136	0.5-1.0'					
FS05	s		1208	0.5-1.0'					
FS04	s		1242	0.3-1.0'					
SW01	s		1355	0.3-3'					
FS08A	s		1447	0.5'					Hold pending results at FS08, FS15, & FS18
FS15A	s		1514	0.8'					
FS18A	s		1517	0.8'					
	s								
	s								

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		3/2/20 12:10	2		
			4		
			6		

Revised Date 051418 Rev. 2018.1

Inter-Office Shipment

IOS Number **59290**

Date/Time: 03/02/20 13:55
Lab# From: **Carlsbad**
Lab# To: **Midland**

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

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

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
654253-001	S	SW02	02/28/20 10:44	SW8015MOD_NM	TPH by SW8015 Mod	03/06/20	03/13/20	JKR	GRO-DRO PHCC10C28 PI	
654253-001	S	SW02	02/28/20 10:44	E300_CL	Chloride by EPA 300	03/06/20	03/27/20	JKR	CL	
654253-001	S	SW02	02/28/20 10:44	SW8021B	BTEX by EPA 8021B	03/06/20	03/13/20	JKR	BZ BZME EBZ XYLENES	
654253-002	S	FS06	02/28/20 11:36	SW8021B	BTEX by EPA 8021B	03/06/20	03/13/20	JKR	BZ BZME EBZ XYLENES	
654253-002	S	FS06	02/28/20 11:36	SW8015MOD_NM	TPH by SW8015 Mod	03/06/20	03/13/20	JKR	GRO-DRO PHCC10C28 PI	
654253-002	S	FS06	02/28/20 11:36	E300_CL	Chloride by EPA 300	03/06/20	03/27/20	JKR	CL	
654253-003	S	FS05	02/28/20 12:02	SW8015MOD_NM	TPH by SW8015 Mod	03/06/20	03/13/20	JKR	GRO-DRO PHCC10C28 PI	
654253-003	S	FS05	02/28/20 12:02	SW8021B	BTEX by EPA 8021B	03/06/20	03/13/20	JKR	BZ BZME EBZ XYLENES	
654253-003	S	FS05	02/28/20 12:02	E300_CL	Chloride by EPA 300	03/06/20	03/27/20	JKR	CL	
654253-004	S	FS04	02/28/20 12:22	SW8015MOD_NM	TPH by SW8015 Mod	03/06/20	03/13/20	JKR	GRO-DRO PHCC10C28 PI	
654253-004	S	FS04	02/28/20 12:22	E300_CL	Chloride by EPA 300	03/06/20	03/27/20	JKR	CL	
654253-004	S	FS04	02/28/20 12:22	SW8021B	BTEX by EPA 8021B	03/06/20	03/13/20	JKR	BZ BZME EBZ XYLENES	
654253-005	S	SW01	02/28/20 13:55	SW8021B	BTEX by EPA 8021B	03/06/20	03/13/20	JKR	BZ BZME EBZ XYLENES	
654253-005	S	SW01	02/28/20 13:55	SW8015MOD_NM	TPH by SW8015 Mod	03/06/20	03/13/20	JKR	GRO-DRO PHCC10C28 PI	
654253-005	S	SW01	02/28/20 13:55	E300_CL	Chloride by EPA 300	03/06/20	03/27/20	JKR	CL	

Inter Office Shipment or Sample Comments:

Relinquished By: Elizabeth McClellan

Date Relinquished: 03/02/2020

Received By: Brianna Teel

Date Received: 03/03/2020 11:08

Cooler Temperature: 0.6

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 59290

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

Sent By: Elizabeth McClellan **Date Sent:** 03/02/2020 01:55 PM

Received By: Brianna Teel **Date Received:** 03/03/2020 11:08 AM

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

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

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

Checklist reviewed by: Brianna Teel Date: 03/03/2020

Brianna Teel

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 03.02.2020 12.10.00 PM

Work Order #: 654253

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

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	3.8	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**	
#5 Custody Seals intact on sample bottles?	**Yes**	
#6*Custody Seals Signed and dated?	**Yes**	
#7 *Chain of Custody present?	**Yes**	
#8 Any missing/extra samples?	**No**	
#9 Chain of Custody signed when relinquished/ received?	**Yes**	
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**	
#11 Container label(s) legible and intact?	**Yes**	
#12 Samples in proper container/ bottle?	**Yes**	
#13 Samples properly preserved?	**Yes**	
#14 Sample container(s) intact?	**Yes**	
#15 Sufficient sample amount for indicated test(s)?	**Yes**	
#16 All samples received within hold time?	**Yes**	
#17 Subcontract of sample(s)?	**Yes**	Subbed to Midland
#18 Water VOC samples have zero headspace?	**N/A**	

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

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 03.02.2020

Checklist reviewed by: Jessica Kramer Date: 03.02.2020

Jessica Kramer

Analytical Report 655698

for

LT Environmental, Inc.

Project Manager: Chris McKisson

RDX Fed 28 #24

034820003

16-MAR-20

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

16-MAR-20

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

Reference: XENCO Report No(s): **655698**
RDX Fed 28 #24
Project Address:

Chris McKisson:

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) 655698. 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. 655698 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Manager

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 655698

LT Environmental, Inc., Arvada, CO

RDX Fed 28 #24

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS12A	S	03-13-20 11:03	2 - 3.5 ft	655698-001

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: RDX Fed 28 #24

Project ID: *034820003*
Work Order Number(s): *655698*

Report Date: *16-MAR-20*
Date Received: *03/13/2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3119634 BTEX by EPA 8021B

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

Certificate of Analysis Summary 655698

LT Environmental, Inc., Arvada, CO

Project Name: RDX Fed 28 #24

Project Id: 034820003
Contact: Chris McKisson
Project Location:

Date Received in Lab: Fri Mar-13-20 03:40 pm
Report Date: 16-MAR-20
Project Manager: Jessica Kramer

Analysis Requested							
	Lab Id:	655698-001					
	Field Id:	FS12A					
	Depth:	2-3.5 ft					
	Matrix:	SOIL					
	Sampled:	Mar-13-20 11:03					
BTEX by EPA 8021B	***Extracted:***	Mar-13-20 18:00					
	Analyzed:	Mar-14-20 04:08					
	Units/RL:	mg/kg	RL				
Benzene		<0.00200	0.00200				
Toluene		<0.00200	0.00200				
Ethylbenzene		<0.00200	0.00200				
m,p-Xylenes		<0.00401	0.00401				
o-Xylene		<0.00200	0.00200				
Xylenes, Total		<0.00200	0.00200				
Total BTEX		<0.00200	0.00200				
Chloride by EPA 300	***Extracted:***	Mar-13-20 19:03					
	Analyzed:	Mar-13-20 21:24					
	Units/RL:	mg/kg	RL				
Chloride		5090	50.0				
TPH by SW8015 Mod	***Extracted:***	Mar-13-20 18:30					
	Analyzed:	Mar-14-20 00:30					
	Units/RL:	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0				
Diesel Range Organics (DRO)		<50.0	50.0				
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0				
Total GRO-DRO		<50.0	50.0				
Total TPH		<50.0	50.0				

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

Jessica Kramer
Project Manager

Certificate of Analytical Results 655698

LT Environmental, Inc., Arvada, CO

RDX Fed 28 #24

Sample Id:	**FS12A**	Matrix:	Soil	Date Received:	03.13.20 15.40
Lab Sample Id:	655698-001	Date Collected:	03.13.20 11.03	Sample Depth:	2 - 3.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.13.20 19.03	Basis:	Wet Weight
Seq Number:	3119637				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**5090**	50.0	mg/kg	03.13.20 21.24		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	03.13.20 18.30	Basis:	Wet Weight
Seq Number:	3119703				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.14.20 00.30	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	03.14.20 00.30	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.14.20 00.30	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	03.14.20 00.30	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	03.14.20 00.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	03.14.20 00.30	
o-Terphenyl	84-15-1	101	%	70-135	03.14.20 00.30	

Certificate of Analytical Results 655698

LT Environmental, Inc., Arvada, CO

RDX Fed 28 #24

Sample Id:	**FS12A**	Matrix:	Soil	Date Received:	03.13.20 15.40
Lab Sample Id:	655698-001	Date Collected:	03.13.20 11.03	Sample Depth:	2 - 3.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.13.20 18.00	Basis:	Wet Weight
Seq Number:	3119634				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.14.20 04.08	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.14.20 04.08	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.14.20 04.08	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	03.14.20 04.08	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.14.20 04.08	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	03.14.20 04.08	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.14.20 04.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	102	%	70-130	03.14.20 04.08	
1,4-Difluorobenzene	540-36-3	103	%	70-130	03.14.20 04.08	

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 655698

LT Environmental, Inc.

RDX Fed 28 #24

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3119637 — Matrix: Solid — Date Prep: 03.13.20
MB Sample Id: 7698873-1-BLK — LCS Sample Id: 7698873-1-BKS — LCSD Sample Id: 7698873-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	260	104	260	104	90-110	0	20	mg/kg	03.13.20 20:09	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3119637 — Matrix: Soil — Date Prep: 03.13.20
Parent Sample Id: 655695-001 — MS Sample Id: 655695-001 S — MSD Sample Id: 655695-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	462	200	674	106	675	107	90-110	0	20	mg/kg	03.13.20 20:26	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3119637 — Matrix: Soil — Date Prep: 03.13.20
Parent Sample Id: 655702-003 — MS Sample Id: 655702-003 S — MSD Sample Id: 655702-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	13.5	200	228	107	226	106	90-110	1	20	mg/kg	03.13.20 21:48	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3119703 — Matrix: Solid — Date Prep: 03.13.20
MB Sample Id: 7698918-1-BLK — LCS Sample Id: 7698918-1-BKS — LCSD Sample Id: 7698918-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	982	98	962	96	70-135	2	35	mg/kg	03.13.20 14:25	
Diesel Range Organics (DRO)	<50.0	1000	1070	107	1060	106	70-135	1	35	mg/kg	03.13.20 14:25	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	93		115		105		70-135	%	03.13.20 14:25
o-Terphenyl	97		107		106		70-135	%	03.13.20 14:25

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3119703 — Matrix: Solid — Date Prep: 03.13.20
MB Sample Id: 7698918-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	03.13.20 15:05	

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 655698

LT Environmental, Inc.

RDX Fed 28 #24

Analytical Method: TPH by SW8015 Mod | Prep Method: SW8015P
Seq Number: 3119703 | Matrix: Soil | Date Prep: 03.13.20
Parent Sample Id: 655684-001 | MS Sample Id: 655684-001 S | MSD Sample Id: 655684-001 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)	<50.0	1000	849	85	878	88	70-135	3	35	mg/kg	03.13.20 18:03	
Diesel Range Organics (DRO)	88.1	1000	936	85	946	86	70-135	1	35	mg/kg	03.13.20 18:03	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	103		105		70-135	%	03.13.20 18:03
o-Terphenyl	99		99		70-135	%	03.13.20 18:03

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3119634 | Matrix: Solid | Date Prep: 03.13.20
MB Sample Id: 7698870-1-BLK | LCS Sample Id: 7698870-1-BKS | LCSD Sample Id: 7698870-1-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	0.109	109	0.107	107	70-130	2	35	mg/kg	03.13.20 23:23	
Toluene	<0.00200	0.100	0.105	105	0.102	102	70-130	3	35	mg/kg	03.13.20 23:23	
Ethylbenzene	<0.00200	0.100	0.0998	100	0.0963	96	71-129	4	35	mg/kg	03.13.20 23:23	
m,p-Xylenes	<0.00400	0.200	0.206	103	0.199	100	70-135	3	35	mg/kg	03.13.20 23:23	
o-Xylene	<0.00200	0.100	0.104	104	0.100	100	71-133	4	35	mg/kg	03.13.20 23:23	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		108		109		70-130	%	03.13.20 23:23
4-Bromofluorobenzene	94		95		92		70-130	%	03.13.20 23:23

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3119634 | Matrix: Soil | Date Prep: 03.13.20
Parent Sample Id: 655684-001 | MS Sample Id: 655684-001 S | MSD Sample Id: 655684-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.111	111	0.0966	97	70-130	14	35	mg/kg	03.14.20 00:03	
Toluene	<0.00201	0.100	0.102	102	0.0892	90	70-130	13	35	mg/kg	03.14.20 00:03	
Ethylbenzene	<0.00201	0.100	0.0981	98	0.0865	87	71-129	13	35	mg/kg	03.14.20 00:03	
m,p-Xylenes	<0.00402	0.201	0.201	100	0.177	89	70-135	13	35	mg/kg	03.14.20 00:03	
o-Xylene	<0.00201	0.100	0.103	103	0.0905	91	71-133	13	35	mg/kg	03.14.20 00:03	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		109		70-130	%	03.14.20 00:03
4-Bromofluorobenzene	91		95		70-130	%	03.14.20 00:03

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

Final 1.000

Chain of Custody

Work Order No: 655698

XENCO LABORATORIES

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

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Project Manager:	Chris Mckisson	Bill to: (if different)	Chris Mckisson
Company Name:	LT Environmental, Inc.,	Company Name:	LT Environmental
Address:	820 Megan Ave, Unit B	Address:	
City, State ZIP:	Rifle, CO 81650	City, State ZIP:	
Phone:	970-285-9985	Email:	Jhill@ltenv.com, cmckisson@ltenv.com

Work Order Comments

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

Project Name:	RDX Fed 28 #24	Turn Around	
Project Number:	034820003	Routine	☑
P.O. Number:	Spill date 1/12/20	Rush:	
Sampler's Name:	Jeremy Hill	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No	
Temperature (°C):	1.6	Thermometer ID	TNM007	
Received Intact:	(Yes) No			
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes (No) N/A	Total Containers:	1	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
FS12A	s	3/13/20	1103	2-3.5'	1	X	X	X
	s							
	s							
	s							
	s							
	s							
	s							
	s							
	s							
	s							

ANALYSIS REQUEST

Work Order Notes

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

Sample Comments

composite

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		3/13/20 15:40	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: 03.13.2020 03.40.00 PM

Work Order #: 655698

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

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1.6
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**
#5 Custody Seals intact on sample bottles?	**Yes**
#6*Custody Seals Signed and dated?	**Yes**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**No**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 03.13.2020

Checklist reviewed by: Jessica Kramer Date: 03.16.2020

Jessica Kramer