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

February 28, 2020

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

EYWAO-200301-C-1410

RE: Deferral Request
WPX Energy Permian, Inc.
Remediation Permit Number 2RP-5678
RDX 21 Federal #023
Eddy County, New Mexico

Dear Mr. Bratcher:

LT Environmental, Inc. (LTE), on behalf of WPX Energy Permian, Inc. (WPX), presents the following Deferral Request detailing soil sampling and excavation activities at the RDX 21 Federal #023 (Site) in Unit G, Section 21, 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 production fluids into an unlined secondary containment and well pad surface, including a light misting of vegetation off location. Based on the excavation activities and results of the soil sampling events, WPX is submitting this Deferral Request, describing remediation that has occurred and requesting to leave impacted soil in the top 4 feet near active production equipment in place until final reclamation.

BACKGROUND

On October 3, 2019, a gasket failure on the well's heater treater caused the release of 10 barrels (bbls) of crude oil and 10 bbls of produced water to be released into the unlined secondary containment, well pad surface and lightly mist vegetation off location. A vacuum truck was dispatched to the Site to recover free-standing fluid; approximately 8 bbls of crude oil and 6 bbls of produced water were recovered. The spill volume was calculated by averaging the saturated soil depth and estimating the percentage of liquids based on soil type. Any free liquids were added to the total volume. The average saturation depth of the soil was observed to range from 0.5 ft to 1 ft. The soil type was determined to be pad surface caliche, which was estimated to have an available space (i.e. porosity) of 15 percent (%) total volume. Based on these assumptions, the following equation was used to calculate total volume:

saturated soil volume (cubic feet) x (4.21 cubic feet per bbl of liquid) x estimated soil porosity (%).

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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 October 9, 2019, and was assigned Remediation Permit (RP) Number 2RP-5678 (Attachment 1).

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 known aquifer properties and the elevation difference between the Site and an identified water well. The nearest permitted water well with depth to water data is United States Geological Survey (USGS) well 320125103514701, located approximately 7,033 feet east of the Site. USGS well 320125103514701 has a reported depth to water of 117 feet bgs and is approximately 7 feet higher in elevation than the Site. The closest significant watercourse to the Site is an unnamed tributary located approximately 536 feet northwest of the Site. The Site is greater than 300 feet from any occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within an unstable area, 100-year floodplain, or overlying a subsurface mine. The Site is located in a medium-potential karst area.

Based on these criteria, the following NMOCD Table 1 closure criteria apply: 10 milligrams per kilogram (mg/kg) benzene; 50 mg/kg total benzene, toluene, ethylbenzene, and total xylenes (BTEX); 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. However, the top 4 feet of the release area is to be reclaimed immediately and therefore the reclamation standard of 600 mg/kg is being applied to the top 4 feet of impacted material.

PRELIMINARY SOIL SAMPLING

On September 9, 2019, LTE personnel inspected the Site to evaluate the release extent. The release extent was mapped using a handheld Global Positing System (GPS) unit and is depicted on Figure 2. Based on visible staining and standing production fluids, excavation of impacted soil was warranted. Photographic documentation was conducted during the Site visit. Photographs are included in Attachment 2.

DELINEATION AND EXCAVATION SOIL SAMPLING

From October 9 through December 16, 2019, LTE was on site to oversee excavation activities within the release area. Excavation activities were directed on pad by field screening soil samples for volatile aromatic hydrocarbons using a photo-ionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. The excavation's lateral extent and depth within the unlined secondary containment was limited due to safety and instability hazards associated with removing soil from around above ground equipment and surface flowlines. On October 17, 2020, a 3 percent solution of MicroBlaze Emergency Liquid Spill Control and fresh water was applied to

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the pasture overspray release area post Bureau of Land Management approval for remediation activities off location.

On December 20, 2020, following completion of excavation activities, 5-point composite confirmation soil samples were collected from the floor (samples labeled as "FS") of the shallow excavations ranging from 0.5 ft to 2 ft bgs. Each soil sample represented at most 200 square feet. Additionally, LTE advanced two soil borings (BH01 and BH02) to vertically delineate impacts surrounding active production equipment. Furthermore, surface soil samples were collected within the overspray release extent to verify the absence of contaminates following the application of MicroBlaze. Soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were shipped at or below 4 degrees Celsius (°C) under strict chain-of-custody (COC) procedures to Xenco Laboratories (Xenco) in Midland, Texas, for analysis of BTEX following United States Environmental Protection Agency (USEPA) Method 8021B; TPH-gasoline range organics (GRO), TPH-diesel range organics (DRO), and TPH-oil range organics (ORO) following USEPA Method 8015M/D; and chloride following USEPA Method 300.0.

From January 8 to January 9, 2020, nine soil borings (BH03 through BH12) were advanced to delineate the lateral extent of remaining soil impacts within the unlined secondary containment. Using a hand auger, boreholes were advanced to depths ranging from 2 to 4 feet bgs. Two soil samples were collected from each soil boring: the most impacted depth based on field screening results and the boring terminus. Soil samples were handled and analyzed as previously stated. The soil boring locations are depicted on Figure 2. Soil Sampling Logs are included as Attachment 3.

Approximately 190 cubic yards of impacted soil were removed from the excavation area and transported to the R360 Red Bluff Facility in Orla, Texas for disposal. The excavation areas measured a total of approximately 5,190 square feet in area and ranged in depth from 0.5 feet to 2 feet bgs in depth.

ANALYTICAL RESULT

Laboratory analytical results indicated that all samples were compliant with the Closure Criteria except for FS23 at 0.5 ft bgs, where the sum of TPH-DRO and TPHGRO concentrations exceeded 1,000 ppm. Impacted soil was excavated to the extent possible without compromising the stability of above ground equipment and the safety of the contractors removing soil with hand shovels. Safety policy restricted soil disturbing activities around active production equipment. This safety policy is established to protect workers and reduce the likelihood of compromising the foundation of the production equipment or pipelines.

Laboratory analytical results for the delineation soil samples collected from boreholes indicate BTEX, TPH, and chloride concentrations were compliant with the Closure Criteria. Additionally,

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laboratory analytical results for surface samples collected throughout the overspray release were compliant the 600 ppm Closure Criteria standard within the top 4 ft of the pasture. Therefore, no further excavation was necessary outside of the unlined secondary containment and no additional remediation actions were warranted for the pasture overspray area. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Attachment 4.

CONCLUSIONS AND DEFERRAL REQUEST

A total of approximately 190 cubic yards of impacted soil were excavated from the Site; however, impacted soil exceeding the Closure Criteria for the sum of TPH-DRO and TPH-GRO was left in place for compliance with the safety policy regarding earth moving activities near above ground equipment. Impacted soil was excavated to the safest extent possible. The impacted soil remaining in place is delineated vertically and laterally as demonstrated by soil samples collected from soil borings BH01 through BH12. An estimated 7.5 cubic yards of impacted soil remain in place between 0 feet and 2 feet bgs based on excavation confirmation and delineation soil samples that were compliant with the NMOCD Table 1 Closure Criteria.

WPX requests to backfill the existing excavations and complete remediation during any future major construction/alteration or final plugging and abandonment, whichever occurs first. LTE and WPX do not believe deferment will result in imminent risk to human health, the environment, or groundwater. WPX requests deferral of final remediation permit number 2RP-5678. Upon approval of this deferral request, WPX will backfill the excavation with material purchased locally and recontour the Site to match pre-existing site conditions. An updated NMOCD Form C-141 is included as Attachment 1.

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.

Anna Byers
Staff Geologist

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

cc: Jim Raley, WPX

Robert Hamlet, NMOCD
Victoria Venegas, NMOCD
Jim Amos, BLM

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Attachments:

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

FIGURES

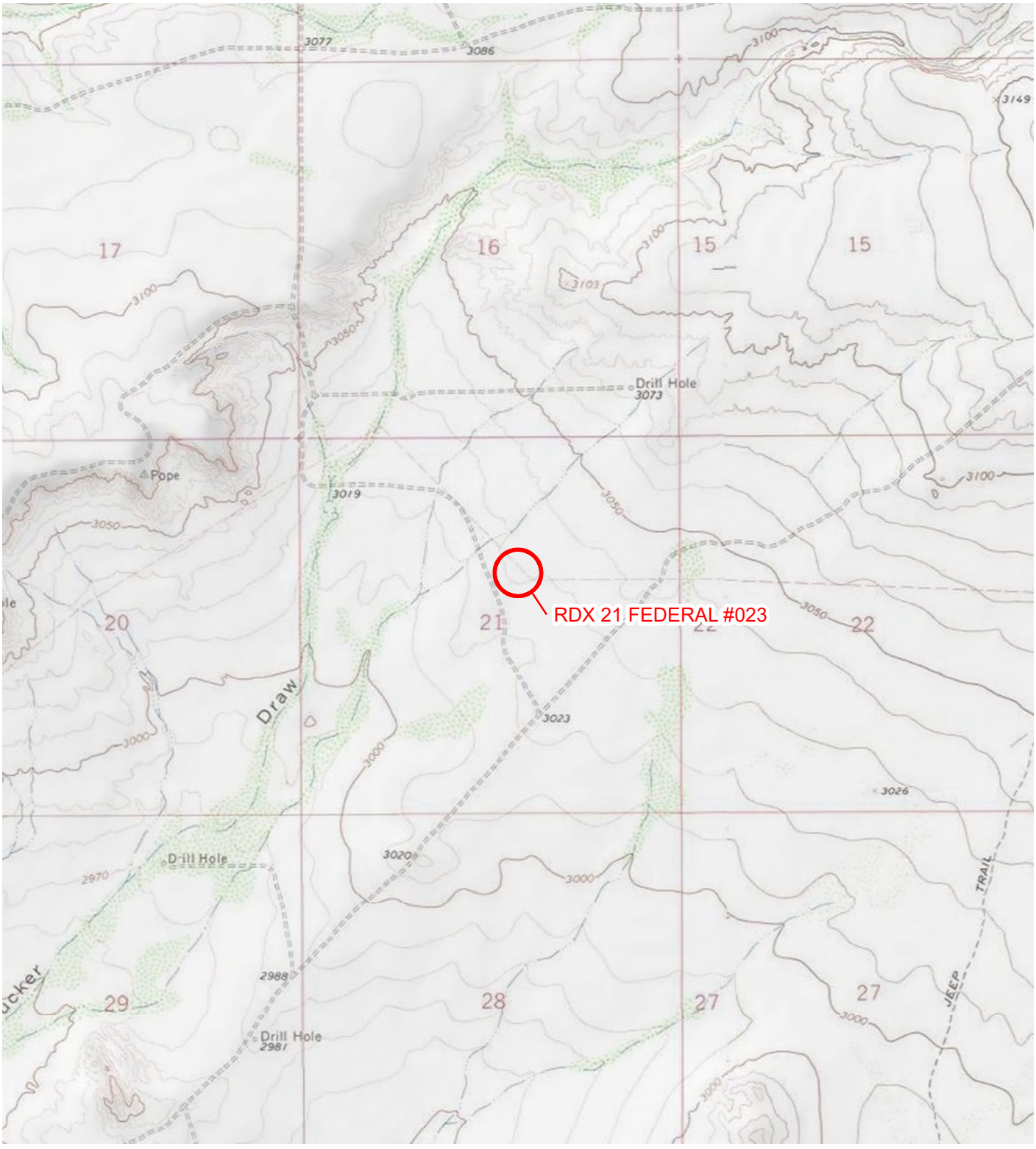

IMAGE COURTESY OF ESRI/USGS

LEGEND

SITE LOCATION

0 2,000 4,000

Feet

N

NEW MEXICO

FIGURE 1
SITE LOCATION MAP
RDX 21 FEDERAL #023
UNIT G SEC 21 T26S R30E
EDDY COUNTY, NEW MEXICO
WPX ENERGY PERMIAN, LLC

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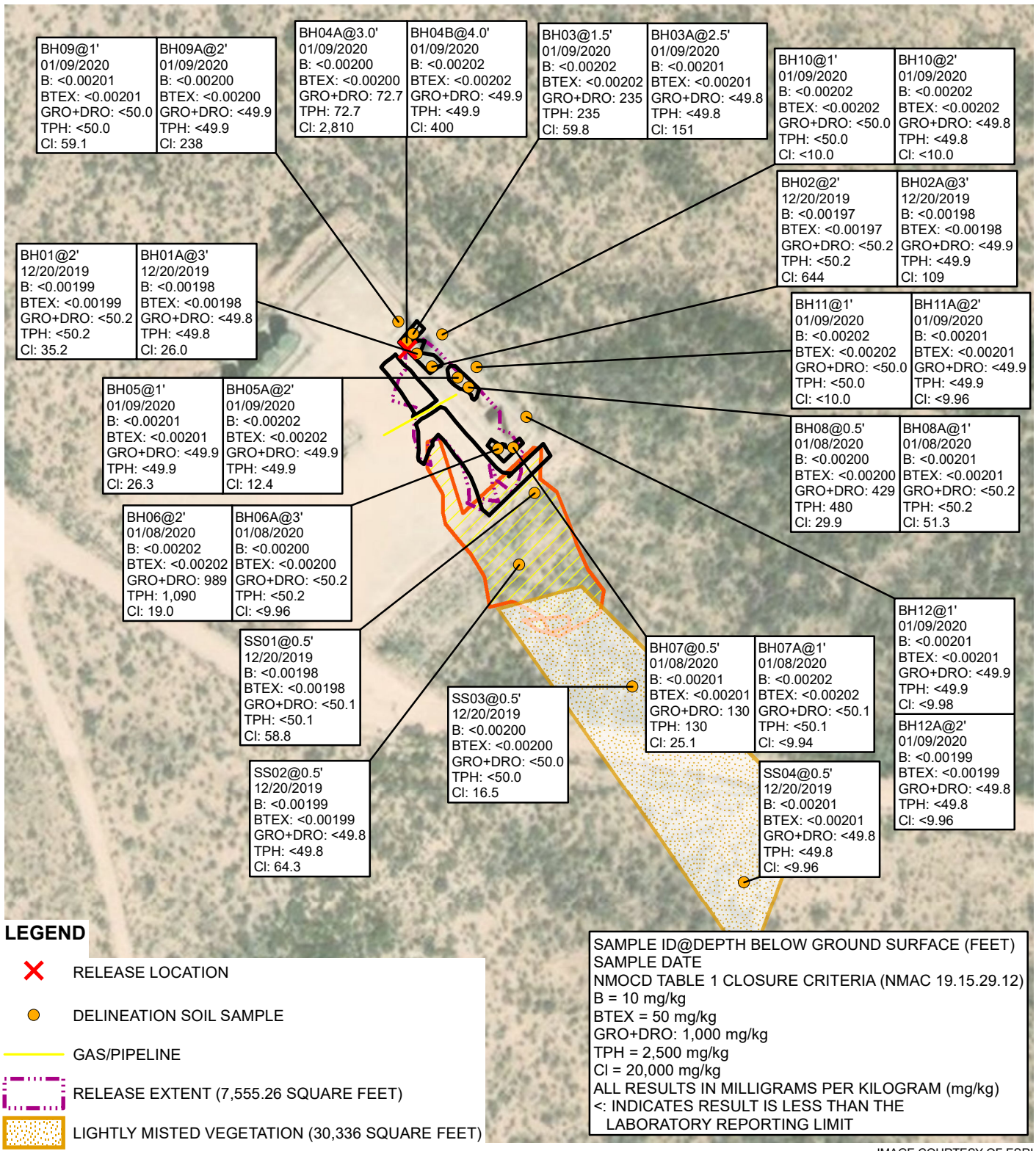


LEGEND

- RELEASE LOCATION
- DELINEATION SOIL SAMPLE
- GAS/PIPELINE
- RELEASE EXTENT (7,555.26 SQUARE FEET)
- LIGHTLY MISTED VEGETATION (30,336 SQUARE FEET)
- OVERSPRAY AREA (11,829 SQUARE FEET)
- EXCAVATION EXTENT

B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
GRO: GASOLINE RANGE ORGANICS
DRO: DIESEL RANGE ORGANICS
TPH – TOTAL PETROLEUM HYDROCARBONS
Cl - CHLORIDE
NMAC – NEW MEXICO ADMINISTRATIVE CODE
NMOCD – NEW MEXICO OIL CONSERVATION DIVISION

SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)
SAMPLE DATE
NMOCD TABLE 1 CLOSURE CRITERIA (NMAC 19.15.29.12)
B = 10 mg/kg
BTEX = 50 mg/kg
GRO+DRO: 1,000 mg/kg
TPH = 2,500 mg/kg
Cl = 20,000 mg/kg
ALL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)
<: INDICATES RESULT IS LESS THAN THE LABORATORY REPORTING LIMIT

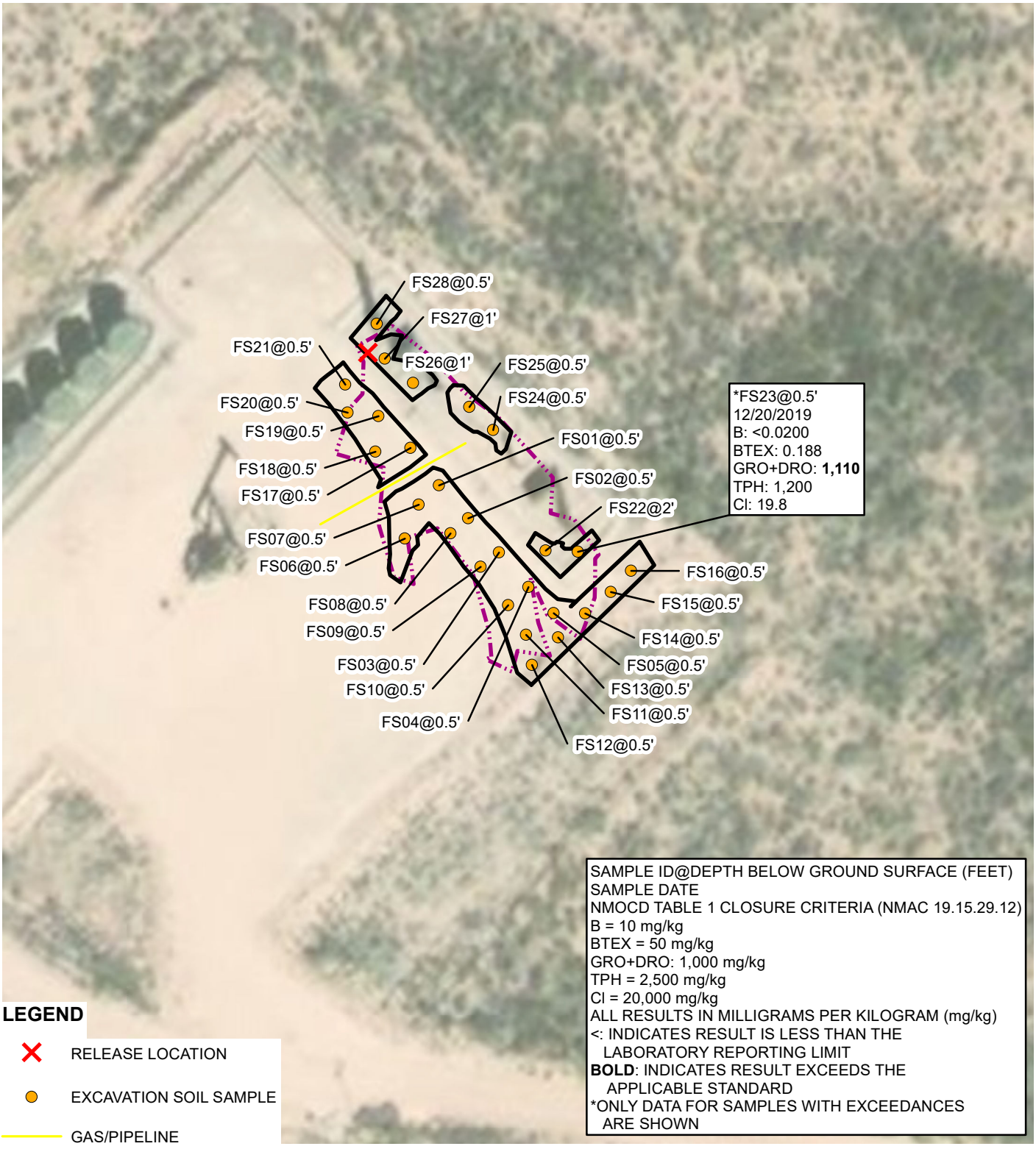
IMAGE COURTESY OF ESRI

0 120 240
Feet

N

FIGURE 2
DELINEATION SOIL SAMPLE LOCATIONS
RDX 21 FEDERAL #023
UNIT G SEC 21 T26S R30E
EDDY COUNTY, NEW MEXICO
WPX ENERGY PERMIAN, LLC

P:\WPX\GIS\MXD\034819068_RDX 21-23\034819068_FIG02_DELINEATION_SS_2020.mxd



SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)
SAMPLE DATE
NMOCD TABLE 1 CLOSURE CRITERIA (NMAC 19.15.29.12)
B = 10 mg/kg
BTEX = 50 mg/kg
GRO+DRO: 1,000 mg/kg
TPH = 2,500 mg/kg
Cl = 20,000 mg/kg
ALL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)
<: INDICATES RESULT IS LESS THAN THE LABORATORY REPORTING LIMIT
BOLD: INDICATES RESULT EXCEEDS THE APPLICABLE STANDARD
*ONLY DATA FOR SAMPLES WITH EXCEEDANCES ARE SHOWN

IMAGE COURTESY OF ESRI

LEGEND

- RELEASE LOCATION
- EXCAVATION SOIL SAMPLE
- GAS/PIPELINE
- RELEASE EXTENT (7,555.26 SQUARE FEET)
- EXCAVATION EXTENT

B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
GRO: GASOLINE RANGE ORGANICS
DRO: DIESEL RANGE ORGANICS
TPH – TOTAL PETROLEUM HYDROCARBONS
Cl - CHLORIDE
NMAC – NEW MEXICO ADMINISTRATIVE CODE
NMOCD – NEW MEXICO OIL CONSERVATION DIVISION

0 60 120
Feet

N

FIGURE 3
EXCAVATION SOIL SAMPLE LOCATIONS
RDX 21 FEDERAL #023
UNIT G SEC 21 T26S R30E
EDDY COUNTY, NEW MEXICO
WPX ENERGY PERMIAN, LLC

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TABLES

TABLE 1
SOIL ANALYTICAL RESULTS

RDX 21 FEDERAL #023
REMEDIATION PERMIT NUMBER 2RP-5678
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
SS01	0.5	12/20/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.1	<50.1	<50.1	<50.1	<50.1	58.8
SS02	0.5	12/20/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.8	<49.8	<49.8	<49.8	<49.8	64.3
SS03	0.5	12/20/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	16.5
SS04	0.5	12/20/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<49.8	<49.8	<49.8	<49.8	<49.8	<9.96
BH01	2	12/20/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.2	<50.2	<50.2	<50.2	<50.2	35.2
BH01A	3	12/20/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<49.8	<49.8	<49.8	<49.8	<49.8	26.0
BH02	2	12/20/2019	<0.00197	<0.00197	<0.00197	<0.00197	<0.00197	<50.2	<50.2	<50.2	<50.2	<50.2	644
BH02A	3	12/20/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<49.9	<49.9	<49.9	<49.9	<49.9	109
BH03	1.5	01/09/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<49.9	235	<49.9	235	235	59.8
BH03A	2.5	01/09/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<49.8	<49.8	<49.8	<49.8	<49.8	151
BH04A	3.0	01/09/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	72.7	<50.0	72.7	72.7	2,810
BH04B	4.0	01/09/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<49.9	<49.9	<49.9	<49.9	<49.9	400
BH05	1	01/09/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<49.9	<49.9	<49.9	<49.9	<49.9	26.3
BH05A	2	01/09/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<49.9	<49.9	<49.9	<49.9	<49.9	12.4
BH06	2	01/08/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.3	989	96.6	989	1,090	19.0
BH06A	3	01/08/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	<9.96
BH07	0.5	01/08/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.2	130	<50.2	130	130	25.1
BH07A	1	01/08/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.1	<50.1	<50.1	<50.1	<50.1	<9.94
BH08	0.5	01/08/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.9	429	51.4	429	480	29.9
BH08A	1	01/08/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.2	<50.2	<50.2	<50.2	<50.2	51.3
BH09	1	01/09/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.0	<50.0	<50.0	<50.0	<50.0	59.1
BH09A	2	01/09/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	238
BH10	1	01/09/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.0	<50.0	<50.0	<50.0	<50.0	<10.0
NMOCD Table 1 Closure Criteria			**10**	NE	NE	NE	**50**	NE	NE	NE	**1,000**	**2,500**	**20,000**

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TABLE 1
SOIL ANALYTICAL RESULTS

RDX 21 FEDERAL #023
REMEDIATION PERMIT NUMBER 2RP-5678
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
BH10A	2	01/09/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<49.8	<49.8	<49.8	<49.8	<49.8	<10.0
BH11	1	01/09/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.0	<50.0	<50.0	<50.0	<50.0	<10.0
BH11A	2	01/09/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<49.9	<49.9	<49.9	<49.9	<49.9	<9.96
BH12	1	01/09/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<49.9	<49.9	<49.9	<49.9	<49.9	<9.98
BH12A	2	01/09/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.8	<49.8	<49.8	<49.8	<49.8	<9.96
FS01	0.5	12/20/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.8	64.9	<49.8	64.9	64.9	277
FS02	0.5	12/20/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	<49.9	115
FS03	0.5	12/20/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.0	<50.0	<50.0	<50.0	<50.0	102
FS04	0.5	12/20/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.3	<50.3	<50.3	<50.3	<50.3	82.6
FS05	0.5	12/20/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	76.8
FS06	0.5	12/20/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	<49.9	61.7
FS07	0.5	12/20/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<49.8	83.2	<49.8	83.2	83.2	321
FS08	0.5	12/20/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.1	<50.1	<50.1	<50.1	<50.1	38.1
FS09	0.5	12/20/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.8	<49.8	<49.8	<49.8	<49.8	20.4
FS10	0.5	12/20/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	<49.9	30.0
FS11	0.5	12/20/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	42.2
FS12	0.5	12/20/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	52.8
FS13	0.5	12/20/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.2	<50.2	<50.2	<50.2	<50.2	60.4
FS14	0.5	12/20/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.1	<50.1	<50.1	<50.1	<50.1	42.7
FS15	0.5	12/20/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.1	<50.1	<50.1	<50.1	<50.1	27.6
FS16	0.5	12/20/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	28.0
FS17	0.5	12/20/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	<49.9	30.9
FS18	0.5	12/20/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	<49.9	80.5
NMOCD Table 1 Closure Criteria			**10**	NE	NE	NE	**50**	NE	NE	NE	**1,000**	**2,500**	**20,000**

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TABLE 1
SOIL ANALYTICAL RESULTS

RDX 21 FEDERAL #023
REMEDIATION PERMIT NUMBER 2RP-5678
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
FS19	0.5	12/20/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	13.7
FS20	0.5	12/20/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.3	75.9	<50.3	75.9	75.9	99.9
FS21	0.5	12/20/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	17.5
FS22	2	12/20/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.9	615	74.7	615	690	228
FS23	0.5	12/20/2019	<0.0200	<0.0200	<0.0200	0.188	0.188	<50.0	1110	94.3	**1,110**	1,200	19.8
FS24	0.5	12/20/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.1	492	63.7	492	556	193
FS25	0.5	12/20/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.9	386	50.2	386	436	341
FS26	1	12/20/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.3	<50.3	<50.3	<50.3	<50.3	407
FS27	1	12/20/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.1	500	87.8	500	588	1,580
FS28	0.5	12/20/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.1	736	100	736	836	1,570
NMOCD Table 1 Closure Criteria			**10**	NE	NE	NE	**50**	NE	NE	NE	**1,000**	**2,500**	**20,000**

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
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	NAB1929429521
District RP	2RP-5678
Facility ID	
Application ID	pAB1929429242

Release Notification 2LRRQ-191009-C-1410

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)* NAB1929429521
Contact mailing address: 5315 Buena Vista Dr., Carlsbad, NM 88220	

Location of Release Source

Latitude 32.0298309 Longitude -103.8851852
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: RDX 21 FEDERAL #023	Site Type: Production Facility
Date Release Discovered: 10/3/2019	API# *(if applicable): 30-015-39816*

Unit Letter	Section	Township	Range	County
G	21	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) 10	Volume Recovered (bbls) 8
☒ Produced Water	Volume Released (bbls) 10	Volume Recovered (bbls) 6
	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: Gasket failure on the well's treater caused approximately 20 BBL's of production fluids to be released unlined secondary containment and well pad, light misting of vegetation slightly off pad.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NAB1929429521
District RP	2RP-5678
Facility ID	
Application ID	pAB1929429242

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

Initial Response

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

☒ The source of the release has been stopped.
☒ The impacted area has been secured to protect human health and the environment.
☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
☒ All free liquids and recoverable materials have been removed and managed appropriately.

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

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

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

Printed Name: Jim Raley
Title: Environmental Specialist

Signature: _____
Date: 10/9/2019

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

OCD Only

Received by: Amalia Bustamante
Date: 10/21/2019

Site Assessment/Characterization

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

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

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

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

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

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

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	**NAB1929429521**
District RP	2RP-5678
Facility ID	
Application ID	pAB1929429242

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: _____ Date: 3-1-2020

email: **James.Raley@wpxenergy.com** Telephone: **575-689-7597**

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	**NAB1929429521**
District RP	2RP-5678
Facility ID	
Application ID	pAB1929429242

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: _____ Date: 3-1-2020

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: Northwestern view of the release extent.

Photograph 2: Southeastern view of the release extent on the pad.

Photograph 3: Southeastern view of the release extent.

Photograph 4: Northwestern view from the eastern pasture.

Site Name: RDX 21 Federal 23
Site Location: Rural Eddy County
Photographs Taken: October 4, 2019

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PHOTOGRAPHIC LOG

Photograph 5: Southeastern end of the unlined secondary containment.

Photograph 6: Northwestern view within the containment.

Photograph 7: Excavation within unlined secondary containment.

Photograph 8: Excavation within unlined secondary containment..

Site Name: RDX 21 Federal 23
Site Location: Rural Eddy County
Photographs Taken: December 20, 2019

PHOTOGRAPHIC LOG

Photograph 9: Excavation around the heater treater release source.

Photograph 10: Excavation southeast of containment.

Photograph 11: Excavation south of containment.

Photograph 12: Northern view of MicroBlaze treated pasture.

Site Name: RDX 21 Federal 23
Site Location: Rural Eddy County
Photographs Taken: December 20, 2019

PHOTOGRAPHIC LOG

Photograph 13: Southeastern view of MicroBlaze treated pasture area.

Photograph 14: Eastern view of MicroBlaze treated pasture area.

Site Name: RDX 21 Federal 23
Site Location: Rural Eddy County
Photographs Taken: December 20, 2019

ATTACHMENT 3: Soil Sampling Log

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

Identifier:	Date:
BH01	12/20/2019
Project Name: RDX Federal 21-23	RP Number: 2RP-5678
Logged By: Fatima Smith	Method: Hand auger
Lat/Long:	Field Screening:
Hole Diameter:	Total Depth: 3'

LITHOLOGIC / SOIL SAMPLING LOG

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			up to 1' previously excavated, tan-earthy brwn sand, non cohesive, no odor
Dry	<168	0.4	N		2		SP	
Dry	<168	0.4	N		3		SP	deepest sample @ 3'
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

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Identifier:	Date:
BH02	12/20/2019
Project Name:	**RP Number:**
RDX Federal 21-23	2RP-5678

LITHOLOGIC / SOIL SAMPLING LOG

Logged By:	Method:
Fatima Smith	Hand auger
Lat/Long:	**Field Screening:**
Hole Diameter:	**Total Depth:** 3'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			up to 1' previously excavated, tan-earthy brwn sand, non cohesive, no odor
					1			
Dry	739	0.9	N		2		SP	
Dry	<166	0.2	N		3		SP	deepest sample @ 3'
					4			
					5			
					6			water
					7			
					8			
					9			
					10			
					11			
					12			

LT Environmental, Inc.
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Carlsbad, New Mexico 88220
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Identifier:	Date:
BH03	1/9/20
Project Name:	**RP Number:**
RDX 21 Fed 23	2RP-5678

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: JH	Method: Hand Auger
Lat/Long:	Field Screening: PID/Chlorides
Hole Diameter: 3"	Total Depth: 2.5'

Comments: TD @ 2.5'

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
					1			
1030 M	0.8 <168	4.3	N	BH03	2	1.5	SPSM	Slight TPH odor. Brown in color. some gravel <10%. Poorly graded sand w/ silt. low plasticity
1035 M	1.4 168	2.5	N	BH03A	3	2.5	SPSM	very slight TPH odor. Brown in color, little gravel. ~5%. Poorly graded san /w s.t. low plasticity
					4			TD @ 2.5'
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

LT Environmental, Inc.
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Carlsbad, New Mexico 88220
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Identifier:	Date:
BH04	1/9/20
Project Name:	**RP Number:**
RDX 21 Fed 23	2RP-5678
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: JH / Method: Hand Auger
Lat/Long:	Field Screening: PID/Chloride / Hole Diameter: 3" / Total Depth: ~~4~~ 4'

Comments: TD @ 4'

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
1050 M	2.0 330.4	6.0	N	BH04	2	2.0	SPSM	Brown in color. TPH odor present. low plasticity Poorly graded sand with silt
1055 M	3.4 67.0	7.0 ~~3.6~~ 7.0	N	BH04A	3	3.0	SWSM	Brown in color. TPH odor present. No plasticity Well graded sand with silt & gravel
1110 M	1.0 <168	1.0	N	BH04B	4	4.0	SWSM	Brown in color. Slight TPH odor present. No plasticity Well graded sand with silt & gravel
					5			TD @ 4'
					6			
					7			
					8			
					9			
					10			
					11			
					12			

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Identifier: BH05	Date: 1/9/20
Project Name: ROX 21 Fed 23	RP Number: 2RP-5678
Logged By: JH	Method: Hand Auger
Hole Diameter: 3"	Total Depth: 2'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening: PID / Chlorides

Comments: TD @ 2'

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
M	0.6 <168	0.7	N	BH05	0 1	1'	SM	Brown w/ red ~~tint~~, No odor. Silty sand with low plasticity. Poorly ~~graded~~ gr sand and graded sand
M	0.6 <168	0.7	N	BH05 SA	2	2'	SM	Brown/w red tint. No odor. Silty sand with low plasticity. Poorly graded sand, some gravel present. <150z
					3			TD at 2'
					4 5 6 7 8 9 10 11 12			

0955 0950

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Carlsbad, New Mexico 88220
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Identifier:	Date:
BH06	1/8/20
Project Name:	**RP Number:**
RDX Federal 21-23	2RP-5678
Logged By: A Byers	**Method:** Hand Auger
Hole Diameter: 2.5 "	**Total Depth:** 3 '

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long: 32.02981468, -103.88476473
Field Screening: PID & Hach Cl⁻ Test Strips

Comments: BDL - Below Detection Limit

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
M	BDL	-	-	-	1	1'	-	excavated
M	BDL	>100	Y	BH06	2	2'	SM	brown sand (m.) with silt, poorly-graded, no plasticity, odor
M	BDL	Ø	N	BH06A	3	3'	SM	brown sand (m.) with silt, poorly-graded, no plasticity, no odor
					4			TOT DEPTH
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

LT Environmental, Inc.
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Carlsbad, New Mexico 88220
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Identifier:	Date:
BH07	1/8/20
Project Name:	**RP Number:**
ROX Federal 21-23	2RP-5678
Logged By: Anna Byers	**Method:** Hand Auger
Lat/Long: 32.02981697, -103.88472309	**Field Screening:** PID + HACH Cl⁻ Test Strips
Hole Diameter: 2.5"	**Total Depth:** 1'

LITHOLOGIC / SOIL SAMPLING LOG

Comments: BDL - Below Detection Limit

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
M	BDL	>100	N	BH07	0	0.5'	SM	brown, sand (m.) with silt, poorly-graded, no plasticity, no odor
M	BDL	Ø	N	BH07A	1	1'	SM	↓
					2			TOT DEPTH
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

LT Environmental, Inc.
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Carlsbad, New Mexico 88220
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Identifier:	Date:
BH08	1/8/20
Project Name:	**RP Number:**
RDX Federal 21-23	2RP-5678
Logged By: Anna Byers	**Method:** Hand Auger
Lat/Long: 32.029959, -103.88484506	**Field Screening:** PID & HACH Cl⁻ Test Strips
Hole Diameter: 2.5 "	**Total Depth:** 1'

LITHOLOGIC / SOIL SAMPLING LOG

Comments: BDL - Below Detection Limit

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
M	BDL	>100	Y	BH08	0	0.5'	SM	brown, poorly-graded sand (cm.) with silt, no odor, no plasticity
M	BDL	Ø	N	BH08A	1	1'	SM	↓
					2			TOT DEPTH
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

LT Environmental, Inc.
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Carlsbad, New Mexico 88220
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Identifier:	Date:
BH09	1/9/20
Project Name:	RP Number:
ROX 21 Fed 83	2RP-5678
Logged By: JH	Method: Hand Auger
Hole Diameter: 3"	Total Depth: 2'
Field Screening: PID / Chlorides	
Lat/Long:	

LITHOLOGIC / SOIL SAMPLING LOG

Comments: TD @ 2'

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
1140 M	0.8 468	0.0	N	BH09	1	1'	SPSM	Brown. no odor. slight plasticity. poorly graded sand with silt.
1145 M	1.8 240.8	0.0	N	BH09A	2	2'	SP	Brown. No odor, no plasticity. poorly graded sand with silt & gravel
					3			TD @ 2 ft
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

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

Identifier: BH10	Date: 1/9/20
Project Name: ROX 21 Fed 23	RP Number: 2RP-5678
Logged By: JH	Method: Hand Auger
Lat/Long:	Field Screening: PID / Chloride
Hole Diameter: 3"	Total Depth: 2'

Comments: TD @ 2'

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
1205 N	0.4 <168	0.2	N	BH10	1	1'	SPSC	Brown. No odor. Medium plasticity. Poorly graded plastic fines with clay
1210 N	0.4 <168	0.2	N	BH10A	2	2'	SWSC	Brown. No odor. low plasticity. well graded sand with clay & gravel
					3			TD @ 2'
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

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

Identifier:	Date:
BH11	1/9/20
Project Name:	**RP Number:**
ROY 21 Fed 23	2RP-5678
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: JH / Method: Hand Auger
Lat/Long:	Field Screening: PID/Chloride / Hole Diameter: 3" / Total Depth: 2'
Comments: TD @ 2'	

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
1225 M	0.4 <168	0.2	N	BH11	1	1'	SP/SC	poorly graded with clay & gravel. No odor. Med plasticity. Brown in color, some organics Flora
1230 M	0.2 <168	0.4	N	BH1A	2	2'	SW/SC	well graded with clay & gravel. No odor with organic flora ~~present~~ present. low plasticity. Brown.
					3			TD @ 2'
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

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

Identifier: BH1d	Date: 1/9/20
Project Name: RDX 21 Fed 23	RP Number: 2RP-5678
Logged By: JH	Method: Hand Auger
Hole Diameter: 3"	Total Depth: 2'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening: PID/Chloride

Comments: TD @ 2'

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
1250 M	0.4 <168	0.0	N	BH1d	0–1	1'	SPSC	Brown, no odor. some organic flora. poorly graded sand with clay + ~~gravel~~ gravel. low plasticity
1255 M	0.4 <168	0.3	N	BH1dA	1–2	2'	P SWSC	Brown. No odor with organic flora. ~~Well~~ Poorly sorted sand with clay & gravel. low plasticity.
					2–3			TD @ 2'
					3–12			

ATTACHMENT 4: Laboratory Analytical Results

Analytical Report 647387

for

LT Environmental, Inc.

Project Manager: Chris McKisson

RDX FEDERAL 21-23

034819068

27-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)

27-FEB-20

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

Reference: XENCO Report No(s): **647387**
RDX FEDERAL 21-23
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) 647387. 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. 647387 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 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS01	S	12-20-19 09:31	0.5 ft	647387-001
FS02	S	12-20-19 09:41	0.5 ft	647387-002
FS03	S	12-20-19 09:45	0.5 ft	647387-003
FS04	S	12-20-19 09:48	0.5 ft	647387-004
FS05	S	12-20-19 09:51	0.5 ft	647387-005
FS06	S	12-20-19 10:16	0.5 ft	647387-006
FS07	S	12-20-19 10:25	0.5 ft	647387-007
FS08	S	12-20-19 10:29	0.5 ft	647387-008
FS09	S	12-20-19 10:32	0.5 ft	647387-009
FS10	S	12-20-19 10:35	0.5 ft	647387-010
FS11	S	12-20-19 10:55	0.5 ft	647387-011
FS12	S	12-20-19 11:02	0.5 ft	647387-012
FS13	S	12-20-19 11:08	0.5 ft	647387-013
FS14	S	12-20-19 11:10	0.5 ft	647387-014
FS15	S	12-20-19 11:20	0.5 ft	647387-015
FS16	S	12-20-19 11:22	0.5 ft	647387-016
FS17	S	12-20-19 11:46	0.5 ft	647387-017
FS18	S	12-20-19 11:48	0.5 ft	647387-018
FS19	S	12-20-19 11:51	0.5 ft	647387-019
FS20	S	12-20-19 12:03	0.5 ft	647387-020
FS21	S	12-20-19 12:06	0.5 ft	647387-021
SS01	S	12-20-19 12:30	0.5 ft	647387-022
SS02	S	12-20-19 12:39	0.5 ft	647387-023
SS03	S	12-20-19 12:47	0.5 ft	647387-024
SS04	S	12-20-19 12:50	0.5 ft	647387-025
FS22	S	12-20-19 13:16	2 ft	647387-026
FS23	S	12-20-19 13:19	0.5 ft	647387-027
FS24	S	12-20-19 13:45	0.5 ft	647387-028
FS25	S	12-20-19 13:47	0.5 ft	647387-029
FS26	S	12-20-19 14:00	1 ft	647387-030
FS27	S	12-20-19 14:02	1 ft	647387-031
FS28	S	12-20-19 14:04	0.5 ft	647387-032
BH01	S	12-20-19 14:28	2 ft	647387-033
BH01A	S	12-20-19 14:30	3 ft	647387-034
BH02	S	12-20-19 15:12	2 ft	647387-035
BH02A	S	12-20-19 15:23	3 ft	647387-036

CASE NARRATIVE

Client Name: LT Environmental, Inc.
Project Name: RDX FEDERAL 21-23

Project ID: *034819068*
Work Order Number(s): *647387*

Report Date: *27-FEB-20*
Date Received: *12/23/2019*

Sample receipt non conformances and comments:

V1.001 - Revision (client email) Corrected sample depths as follows below. JK 02/27/20
SS16 to SS01
SS17 to SS02
SS18 to SS03
SS19 to SS04

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3111552 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3111553 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3111557 Chloride by EPA 300
Lab Sample ID 647387-023 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered below QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 647387-013, -014, -015, -016, -017, -018, -019, -020, -021, -022, -023, -024, -025, -026, -027, -028, -029, -030, -031, -032.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3111567 Chloride by EPA 300
Lab Sample ID 647419-007 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 647387-033, -034, -035, -036.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3111623 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 647387

LT Environmental, Inc., Arvada, CO

Project Name: RDX FEDERAL 21-23

Project Id: 034819068
Contact: Chris McKisson
Project Location:

Date Received in Lab: Mon Dec-23-19 11:00 am
Report Date: 27-FEB-20
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	647387-001		647387-002		647387-003		647387-004		647387-005		647387-006	
	Field Id:	FS01		FS02		FS03		FS04		FS05		FS06	
	Depth:	0.5- ft		0.5- ft		0.5- ft		0.5- ft		0.5- ft		0.5- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Dec-20-19 09:31		Dec-20-19 09:41		Dec-20-19 09:45		Dec-20-19 09:48		Dec-20-19 09:51		Dec-20-19 10:16	
BTEX by EPA 8021B	***Extracted:***	Dec-23-19 12:00		Dec-23-19 12:00		Dec-23-19 12:00		Dec-23-19 12:00		Dec-23-19 12:00		Dec-23-19 12:00	
	Analyzed:	Dec-23-19 17:47		Dec-23-19 18:05		Dec-23-19 18:22		Dec-23-19 18:40		Dec-23-19 18:57		Dec-23-19 19:15	
	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	<0.00199	0.00199	<0.00198	0.00198	<0.00198	0.00198	<0.00200	0.00200	<0.00199	0.00199
Toluene		<0.00200	0.00200	<0.00199	0.00199	<0.00198	0.00198	<0.00198	0.00198	<0.00200	0.00200	<0.00199	0.00199
Ethylbenzene		<0.00200	0.00200	<0.00199	0.00199	<0.00198	0.00198	<0.00198	0.00198	<0.00200	0.00200	<0.00199	0.00199
m,p-Xylenes		<0.00400	0.00400	<0.00398	0.00398	<0.00395	0.00395	<0.00395	0.00395	<0.00401	0.00401	<0.00398	0.00398
o-Xylene		<0.00200	0.00200	<0.00199	0.00199	<0.00198	0.00198	<0.00198	0.00198	<0.00200	0.00200	<0.00199	0.00199
Xylenes, Total		<0.00200	0.00200	<0.00199	0.00199	<0.00198	0.00198	<0.00198	0.00198	<0.00200	0.00200	<0.00199	0.00199
Total BTEX		<0.00200	0.00200	<0.00199	0.00199	<0.00198	0.00198	<0.00198	0.00198	<0.00200	0.00200	<0.00199	0.00199
Chloride by EPA 300	***Extracted:***	Dec-23-19 13:11		Dec-23-19 13:11		Dec-23-19 13:11		Dec-23-19 13:11		Dec-23-19 13:11		Dec-23-19 13:11	
	Analyzed:	Dec-23-19 18:03		Dec-23-19 18:09		Dec-23-19 18:14		Dec-23-19 18:32		Dec-23-19 18:38		Dec-23-19 18:55	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		277	49.6	115	49.9	102	49.8	82.6	49.4	76.8	49.9	61.7	49.4
TPH by SW8015 Mod	***Extracted:***	Dec-23-19 13:00		Dec-23-19 13:00		Dec-23-19 13:00		Dec-23-19 13:00		Dec-23-19 13:00		Dec-23-19 13:00	
	Analyzed:	Dec-23-19 14:07		Dec-23-19 14:27		Dec-23-19 14:47		Dec-23-19 14:47		Dec-23-19 15:07		Dec-23-19 15:07	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<49.8	49.8	<49.9	49.9	<50.0	50.0	<50.3	50.3	<49.8	49.8	<49.9	49.9
Diesel Range Organics (DRO)		64.9	49.8	<49.9	49.9	<50.0	50.0	<50.3	50.3	<49.8	49.8	<49.9	49.9
Motor Oil Range Hydrocarbons (MRO)		<49.8	49.8	<49.9	49.9	<50.0	50.0	<50.3	50.3	<49.8	49.8	<49.9	49.9
Total GRO-DRO		64.9	49.8	<49.9	49.9	<50.0	50.0	<50.3	50.3	<49.8	49.8	<49.9	49.9
Total TPH		64.9	49.8	<49.9	49.9	<50.0	50.0	<50.3	50.3	<49.8	49.8	<49.9	49.9

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

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 647387

LT Environmental, Inc., Arvada, CO

Project Name: RDX FEDERAL 21-23

Project Id: 034819068
Contact: Chris McKisson
Project Location:

Date Received in Lab: Mon Dec-23-19 11:00 am
Report Date: 27-FEB-20
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	647387-007		647387-008		647387-009		647387-010		647387-011		647387-012	
	Field Id:	FS07		FS08		FS09		FS10		FS11		FS12	
	Depth:	0.5- ft		0.5- ft		0.5- ft		0.5- ft		0.5- ft		0.5- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Dec-20-19 10:25		Dec-20-19 10:29		Dec-20-19 10:32		Dec-20-19 10:35		Dec-20-19 10:55		Dec-20-19 11:02	
BTEX by EPA 8021B	***Extracted:***	Dec-23-19 12:00		Dec-23-19 12:00		Dec-23-19 12:00		Dec-23-19 12:00		Dec-23-19 12:00		Dec-23-19 12:00	
	Analyzed:	Dec-23-19 19:32		Dec-23-19 19:49		Dec-23-19 20:07		Dec-23-19 20:24		Dec-23-19 21:33		Dec-23-19 21:51	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00198	0.00198	<0.00198	0.00198	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
Toluene		<0.00198	0.00198	<0.00198	0.00198	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
Ethylbenzene		<0.00198	0.00198	<0.00198	0.00198	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
m,p-Xylenes		<0.00395	0.00395	<0.00397	0.00397	<0.00398	0.00398	<0.00398	0.00398	<0.00399	0.00399	<0.00399	0.00399
o-Xylene		<0.00198	0.00198	<0.00198	0.00198	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
Xylenes, Total		<0.00198	0.00198	<0.00198	0.00198	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
Total BTEX		<0.00198	0.00198	<0.00198	0.00198	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
Chloride by EPA 300	***Extracted:***	Dec-23-19 13:11		Dec-23-19 13:11		Dec-23-19 13:11		Dec-23-19 13:11		Dec-23-19 13:11		Dec-23-19 13:11	
	Analyzed:	Dec-23-19 19:01		Dec-23-19 19:06		Dec-23-19 19:12		Dec-23-19 19:18		Dec-23-19 19:24		Dec-23-19 19:30	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		321	49.3	38.1	9.92	20.4	9.88	30.0	9.98	42.2	9.86	52.8	9.98
TPH by SW8015 Mod	***Extracted:***	Dec-23-19 13:00		Dec-23-19 13:00		Dec-23-19 13:00		Dec-23-19 13:00		Dec-23-19 13:00		Dec-23-19 13:00	
	Analyzed:	Dec-23-19 15:26		Dec-23-19 15:26		Dec-23-19 15:46		Dec-23-19 15:46		Dec-23-19 16:06		Dec-23-19 16:26	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<49.8	49.8	<50.1	50.1	<49.8	49.8	<49.9	49.9	<50.0	50.0	<49.8	49.8
Diesel Range Organics (DRO)		83.2	49.8	<50.1	50.1	<49.8	49.8	<49.9	49.9	<50.0	50.0	<49.8	49.8
Motor Oil Range Hydrocarbons (MRO)		<49.8	49.8	<50.1	50.1	<49.8	49.8	<49.9	49.9	<50.0	50.0	<49.8	49.8
Total GRO-DRO		83.2	49.8	<50.1	50.1	<49.8	49.8	<49.9	49.9	<50.0	50.0	<49.8	49.8
Total TPH		83.2	49.8	<50.1	50.1	<49.8	49.8	<49.9	49.9	<50.0	50.0	<49.8	49.8

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 647387

LT Environmental, Inc., Arvada, CO

Project Name: RDX FEDERAL 21-23

Project Id: 034819068
Contact: Chris McKisson
Project Location:

Date Received in Lab: Mon Dec-23-19 11:00 am
Report Date: 27-FEB-20
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	647387-013		647387-014		647387-015		647387-016		647387-017		647387-018	
	Field Id:	FS13		FS14		FS15		FS16		FS17		FS18	
	Depth:	0.5- ft		0.5- ft		0.5- ft		0.5- ft		0.5- ft		0.5- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Dec-20-19 11:08		Dec-20-19 11:10		Dec-20-19 11:20		Dec-20-19 11:22		Dec-20-19 11:46		Dec-20-19 11:48	
BTEX by EPA 8021B	***Extracted:***	Dec-23-19 12:00		Dec-23-19 12:00		Dec-23-19 12:00		Dec-23-19 12:00		Dec-23-19 12:00		Dec-23-19 12:00	
	Analyzed:	Dec-23-19 22:08		Dec-23-19 22:26		Dec-23-19 22:43		Dec-23-19 23:00		Dec-23-19 23:18		Dec-23-19 23:35	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00198	0.00198	<0.00202	0.00202	<0.00202	0.00202	<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199
Toluene		<0.00198	0.00198	<0.00202	0.00202	<0.00202	0.00202	<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199
Ethylbenzene		<0.00198	0.00198	<0.00202	0.00202	<0.00202	0.00202	<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199
m,p-Xylenes		<0.00396	0.00396	<0.00403	0.00403	<0.00403	0.00403	<0.00398	0.00398	<0.00398	0.00398	<0.00398	0.00398
o-Xylene		<0.00198	0.00198	<0.00202	0.00202	<0.00202	0.00202	<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199
Xylenes, Total		<0.00198	0.00198	<0.00202	0.00202	<0.00202	0.00202	<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199
Total BTEX		<0.00198	0.00198	<0.00202	0.00202	<0.00202	0.00202	<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199
Chloride by EPA 300	***Extracted:***	Dec-23-19 15:00		Dec-23-19 15:00		Dec-23-19 15:00		Dec-23-19 15:00		Dec-23-19 15:00		Dec-23-19 15:00	
	Analyzed:	Dec-23-19 20:04		Dec-23-19 20:22		Dec-23-19 20:27		Dec-23-19 20:33		Dec-23-19 20:39		Dec-23-19 20:56	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		60.4	9.98	42.7	10.0	27.6	9.94	28.0	9.88	30.9	9.98	80.5	9.96
TPH by SW8015 Mod	***Extracted:***	Dec-23-19 13:00		Dec-23-19 13:00		Dec-23-19 13:00		Dec-23-19 13:00		Dec-23-19 13:00		Dec-23-19 13:00	
	Analyzed:	Dec-23-19 16:26		Dec-23-19 16:46		Dec-23-19 16:46		Dec-23-19 17:06		Dec-23-19 17:06		Dec-23-19 17:26	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.2	50.2	<50.1	50.1	<50.1	50.1	<50.0	50.0	<49.9	49.9	<49.9	49.9
Diesel Range Organics (DRO)		<50.2	50.2	<50.1	50.1	<50.1	50.1	<50.0	50.0	<49.9	49.9	<49.9	49.9
Motor Oil Range Hydrocarbons (MRO)		<50.2	50.2	<50.1	50.1	<50.1	50.1	<50.0	50.0	<49.9	49.9	<49.9	49.9
Total GRO-DRO		<50.2	50.2	<50.1	50.1	<50.1	50.1	<50.0	50.0	<49.9	49.9	<49.9	49.9
Total TPH		<50.2	50.2	<50.1	50.1	<50.1	50.1	<50.0	50.0	<49.9	49.9	<49.9	49.9

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 647387

LT Environmental, Inc., Arvada, CO

Project Name: RDX FEDERAL 21-23

Project Id: 034819068
Contact: Chris McKisson
Project Location:

Date Received in Lab: Mon Dec-23-19 11:00 am
Report Date: 27-FEB-20
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	647387-019		647387-020		647387-021		647387-022		647387-023		647387-024	
	Field Id:	FS19		FS20		FS21		SS01		SS02		SS03	
	Depth:	0.5- ft		0.5- ft		0.5- ft		0.5- ft		0.5- ft		0.5- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Dec-20-19 11:51		Dec-20-19 12:03		Dec-20-19 12:06		Dec-20-19 12:30		Dec-20-19 12:39		Dec-20-19 12:47	
BTEX by EPA 8021B	***Extracted:***	Dec-23-19 12:00		Dec-23-19 12:00		Dec-23-19 12:00		Dec-23-19 12:00		Dec-23-19 12:00		Dec-23-19 12:00	
	Analyzed:	Dec-23-19 23:53		Dec-24-19 00:10		Dec-23-19 20:20		Dec-23-19 20:39		Dec-23-19 21:42		Dec-23-19 22:01	
	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	<0.00199	0.00199	<0.00200	0.00200	<0.00198	0.00198	<0.00199	0.00199	<0.00200	0.00200
Toluene		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00198	0.00198	<0.00199	0.00199	<0.00200	0.00200
Ethylbenzene		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00198	0.00198	<0.00199	0.00199	<0.00200	0.00200
m,p-Xylenes		<0.00400	0.00400	<0.00398	0.00398	<0.00399	0.00399	<0.00397	0.00397	<0.00398	0.00398	<0.00400	0.00400
o-Xylene		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00198	0.00198	<0.00199	0.00199	<0.00200	0.00200
Xylenes, Total		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00198	0.00198	<0.00199	0.00199	<0.00200	0.00200
Total BTEX		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00198	0.00198	<0.00199	0.00199	<0.00200	0.00200
Chloride by EPA 300	***Extracted:***	Dec-23-19 15:00		Dec-23-19 15:00		Dec-23-19 15:00		Dec-23-19 15:00		Dec-23-19 15:00		Dec-23-19 15:00	
	Analyzed:	Dec-23-19 21:02		Dec-23-19 21:08		Dec-23-19 21:14		Dec-23-19 21:21		Dec-23-19 21:27		Dec-23-19 21:46	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		13.7	9.92	99.9	9.98	17.5	9.88	58.8	10.0	64.3	10.1	16.5	9.98
TPH by SW8015 Mod	***Extracted:***	Dec-23-19 13:00		Dec-23-19 13:00		Dec-23-19 15:00		Dec-23-19 15:00		Dec-23-19 15:00		Dec-23-19 15:00	
	Analyzed:	Dec-23-19 17:26		Dec-23-19 17:45		Dec-23-19 20:04		Dec-23-19 20:24		Dec-23-19 20:44		Dec-23-19 20:44	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<49.8	49.8	<50.3	50.3	<50.1	50.1	<50.1	50.1	<49.8	49.8	<50.0	50.0
Diesel Range Organics (DRO)		<49.8	49.8	75.9	50.3	<50.1	50.1	<50.1	50.1	<49.8	49.8	<50.0	50.0
Motor Oil Range Hydrocarbons (MRO)		<49.8	49.8	<50.3	50.3	<50.1	50.1	<50.1	50.1	<49.8	49.8	<50.0	50.0
Total GRO-DRO		<49.8	49.8	75.9	50.3	<50.1	50.1	<50.1	50.1	<49.8	49.8	<50.0	50.0
Total TPH		<49.8	49.8	75.9	50.3	<50.1	50.1	<50.1	50.1	<49.8	49.8	<50.0	50.0

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 647387

LT Environmental, Inc., Arvada, CO

Project Name: RDX FEDERAL 21-23

Project Id: 034819068
Contact: Chris McKisson
Project Location:

Date Received in Lab: Mon Dec-23-19 11:00 am
Report Date: 27-FEB-20
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	647387-025		647387-026		647387-027		647387-028		647387-029		647387-030	
	Field Id:	SS04		FS22		FS23		FS24		FS25		FS26	
	Depth:	0.5- ft		2- ft		0.5- ft		0.5- ft		0.5- ft		1- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Dec-20-19 12:50		Dec-20-19 13:16		Dec-20-19 13:19		Dec-20-19 13:45		Dec-20-19 13:47		Dec-20-19 14:00	
BTEX by EPA 8021B	***Extracted:***	Dec-23-19 12:00		Dec-23-19 12:00		Dec-23-19 12:00		Dec-23-19 12:00		Dec-23-19 12:00		Dec-23-19 12:00	
	Analyzed:	Dec-23-19 22:21		Dec-23-19 22:40		Dec-23-19 22:59		Dec-23-19 23:18		Dec-23-19 23:37		Dec-23-19 23:56	
	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	<0.0200	0.0200	<0.00201	0.00201	<0.00199	0.00199	<0.00202	0.00202
Toluene		<0.00201	0.00201	<0.00200	0.00200	<0.0200	0.0200	<0.00201	0.00201	<0.00199	0.00199	<0.00202	0.00202
Ethylbenzene		<0.00201	0.00201	<0.00200	0.00200	<0.0200	0.0200	<0.00201	0.00201	<0.00199	0.00199	<0.00202	0.00202
m,p-Xylenes		<0.00402	0.00402	<0.00401	0.00401	<0.0400	0.0400	<0.00402	0.00402	<0.00398	0.00398	<0.00403	0.00403
o-Xylene		<0.00201	0.00201	<0.00200	0.00200	0.188	0.0200	<0.00201	0.00201	<0.00199	0.00199	<0.00202	0.00202
Xylenes, Total		<0.00201	0.00201	<0.00200	0.00200	0.188	0.0200	<0.00201	0.00201	<0.00199	0.00199	<0.00202	0.00202
Total BTEX		<0.00201	0.00201	<0.00200	0.00200	0.188	0.0200	<0.00201	0.00201	<0.00199	0.00199	<0.00202	0.00202
Chloride by EPA 300	***Extracted:***	Dec-23-19 15:00		Dec-23-19 15:00		Dec-23-19 15:00		Dec-23-19 15:00		Dec-23-19 15:00		Dec-23-19 15:00	
	Analyzed:	Dec-23-19 21:52		Dec-23-19 22:11		Dec-23-19 22:17		Dec-23-19 22:23		Dec-23-19 22:29		Dec-23-19 22:36	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		<9.96	9.96	228	99.8	19.8	9.94	193	49.9	341	49.6	407	10.0
TPH by SW8015 Mod	***Extracted:***	Dec-23-19 15:00		Dec-23-19 15:00		Dec-23-19 15:00		Dec-23-19 15:00		Dec-23-19 15:00		Dec-23-19 15:00	
	Analyzed:	Dec-23-19 21:04		Dec-23-19 21:04		Dec-23-19 21:24		Dec-23-19 21:24		Dec-23-19 21:43		Dec-23-19 21:43	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<49.8	49.8	<49.9	49.9	<50.0	50.0	<50.1	50.1	<49.9	49.9	<50.3	50.3
Diesel Range Organics (DRO)		<49.8	49.8	615	49.9	1110	50.0	492	50.1	386	49.9	<50.3	50.3
Motor Oil Range Hydrocarbons (MRO)		<49.8	49.8	74.7	49.9	94.3	50.0	63.7	50.1	50.2	49.9	<50.3	50.3
Total GRO-DRO		<49.8	49.8	615	49.9	1110	50.0	492	50.1	386	49.9	<50.3	50.3
Total TPH		<49.8	49.8	690	49.9	1200	50.0	556	50.1	436	49.9	<50.3	50.3

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 647387

LT Environmental, Inc., Arvada, CO

Project Name: RDX FEDERAL 21-23

Project Id: 034819068
Contact: Chris McKisson
Project Location:

Date Received in Lab: Mon Dec-23-19 11:00 am
Report Date: 27-FEB-20
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	647387-031		647387-032		647387-033		647387-034		647387-035		647387-036	
	Field Id:	FS27		FS28		BH01		BH01A		BH02		BH02A	
	Depth:	1- ft		0.5- ft		2- ft		3- ft		2- ft		3- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Dec-20-19 14:02		Dec-20-19 14:04		Dec-20-19 14:28		Dec-20-19 14:30		Dec-20-19 15:12		Dec-20-19 15:23	
BTEX by EPA 8021B	***Extracted:***	Dec-23-19 12:00		Dec-23-19 12:00		Dec-24-19 08:07		Dec-24-19 08:07		Dec-24-19 08:07		Dec-24-19 08:07	
	Analyzed:	Dec-24-19 00:15		Dec-24-19 00:34		Dec-24-19 11:13		Dec-24-19 11:31		Dec-24-19 11:48		Dec-24-19 10:56	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00199	0.00199	<0.00202	0.00202	<0.00199	0.00199	<0.00198	0.00198	<0.00197	0.00197	<0.00198	0.00198
Toluene		<0.00199	0.00199	<0.00202	0.00202	<0.00199	0.00199	<0.00198	0.00198	<0.00197	0.00197	<0.00198	0.00198
Ethylbenzene		<0.00199	0.00199	<0.00202	0.00202	<0.00199	0.00199	<0.00198	0.00198	<0.00197	0.00197	<0.00198	0.00198
m,p-Xylenes		<0.00398	0.00398	<0.00404	0.00404	<0.00398	0.00398	<0.00396	0.00396	<0.00394	0.00394	<0.00397	0.00397
o-Xylene		<0.00199	0.00199	<0.00202	0.00202	<0.00199	0.00199	<0.00198	0.00198	<0.00197	0.00197	<0.00198	0.00198
Xylenes, Total		<0.00199	0.00199	<0.00202	0.00202	<0.00199	0.00199	<0.00198	0.00198	<0.00197	0.00197	<0.00198	0.00198
Total BTEX		<0.00199	0.00199	<0.00202	0.00202	<0.00199	0.00199	<0.00198	0.00198	<0.00197	0.00197	<0.00198	0.00198
Chloride by EPA 300	***Extracted:***	Dec-23-19 15:00		Dec-23-19 15:00		Dec-23-19 17:00		Dec-23-19 17:00		Dec-23-19 17:00		Dec-23-19 17:00	
	Analyzed:	Dec-23-19 22:42		Dec-23-19 22:48		Dec-23-19 23:25		Dec-23-19 23:44		Dec-23-19 23:50		Dec-23-19 23:57	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		1580	49.3	1570	49.9	35.2	10.0	26.0	9.90	644	49.9	109	9.96
TPH by SW8015 Mod	***Extracted:***	Dec-23-19 15:00		Dec-23-19 15:00		Dec-23-19 17:00		Dec-23-19 17:00		Dec-24-19 12:00		Dec-24-19 12:00	
	Analyzed:	Dec-23-19 22:03		Dec-23-19 22:03		Dec-23-19 23:02		Dec-23-19 23:22		Dec-24-19 12:36		Dec-24-19 12:56	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.1	50.1	<50.1	50.1	<50.2	50.2	<49.8	49.8	<50.2	50.2	<49.9	49.9
Diesel Range Organics (DRO)		500	50.1	736	50.1	<50.2	50.2	<49.8	49.8	<50.2	50.2	<49.9	49.9
Motor Oil Range Hydrocarbons (MRO)		87.8	50.1	100	50.1	<50.2	50.2	<49.8	49.8	<50.2	50.2	<49.9	49.9
Total GRO-DRO		500	50.1	736	50.1	<50.2	50.2	<49.8	49.8	<50.2	50.2	<49.9	49.9
Total TPH		588	50.1	836	50.1	<50.2	50.2	<49.8	49.8	<50.2	50.2	<49.9	49.9

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

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-001	Date Collected:	12.20.19 09.31	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 13.11	Basis:	Wet Weight
Seq Number:	3111556				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**277**	49.6	mg/kg	12.23.19 18.03		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.23.19 13.00	Basis:	Wet Weight
Seq Number:	3111569				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	12.23.19 14.07	U	1
Diesel Range Organics (DRO)	C10C28DRO	**64.9**	49.8	mg/kg	12.23.19 14.07		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	12.23.19 14.07	U	1
Total GRO-DRO	PHC628	**64.9**	49.8	mg/kg	12.23.19 14.07		1
Total TPH	PHC635	**64.9**	49.8	mg/kg	12.23.19 14.07		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-135	12.23.19 14.07	
o-Terphenyl	84-15-1	117	%	70-135	12.23.19 14.07	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-001	Date Collected:	12.20.19 09.31	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 12.00	Basis:	Wet Weight
Seq Number:	3111552				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.23.19 17.47	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.23.19 17.47	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.23.19 17.47	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.23.19 17.47	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.23.19 17.47	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	12.23.19 17.47	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.23.19 17.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	102	%	70-130	12.23.19 17.47	
1,4-Difluorobenzene	540-36-3	101	%	70-130	12.23.19 17.47	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-002	Date Collected:	12.20.19 09.41	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 13.11	Basis:	Wet Weight
Seq Number:	3111556				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**115**	49.9	mg/kg	12.23.19 18.09		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.23.19 13.00	Basis:	Wet Weight
Seq Number:	3111569				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	12.23.19 14.27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	12.23.19 14.27	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	12.23.19 14.27	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	12.23.19 14.27	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	12.23.19 14.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	12.23.19 14.27	
o-Terphenyl	84-15-1	102	%	70-135	12.23.19 14.27	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-002	Date Collected:	12.20.19 09.41	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 12.00	Basis:	Wet Weight
Seq Number:	3111552				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.23.19 18.05	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.23.19 18.05	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	12.23.19 18.05	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	12.23.19 18.05	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	12.23.19 18.05	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	12.23.19 18.05	U	1
Total BTEX		<0.00199	0.00199	mg/kg	12.23.19 18.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	99	%	70-130	12.23.19 18.05	
1,4-Difluorobenzene	540-36-3	99	%	70-130	12.23.19 18.05	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**FS03**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-003	Date Collected:	12.20.19 09.45	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 13.11	Basis:	Wet Weight
Seq Number:	3111556				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**102**	49.8	mg/kg	12.23.19 18.14		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.23.19 13.00	Basis:	Wet Weight
Seq Number:	3111569				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.23.19 14.47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.23.19 14.47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.23.19 14.47	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	12.23.19 14.47	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	12.23.19 14.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-135	12.23.19 14.47	
o-Terphenyl	84-15-1	112	%	70-135	12.23.19 14.47	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**FS03**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-003	Date Collected:	12.20.19 09.45	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 12.00	Basis:	Wet Weight
Seq Number:	3111552				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	12.23.19 18.22	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	12.23.19 18.22	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	12.23.19 18.22	U	1
m,p-Xylenes	179601-23-1	<0.00395	0.00395	mg/kg	12.23.19 18.22	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	12.23.19 18.22	U	1
Xylenes, Total	1330-20-7	<0.00198	0.00198	mg/kg	12.23.19 18.22	U	1
Total BTEX		<0.00198	0.00198	mg/kg	12.23.19 18.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	12.23.19 18.22	
4-Bromofluorobenzene	460-00-4	100	%	70-130	12.23.19 18.22	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**FS04**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-004	Date Collected:	12.20.19 09.48	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 13.11	Basis:	Wet Weight
Seq Number:	3111556				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**82.6**	49.4	mg/kg	12.23.19 18.32		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.23.19 13.00	Basis:	Wet Weight
Seq Number:	3111569				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	12.23.19 14.47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	12.23.19 14.47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	12.23.19 14.47	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	12.23.19 14.47	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	12.23.19 14.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	12.23.19 14.47	
o-Terphenyl	84-15-1	97	%	70-135	12.23.19 14.47	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**FS04**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-004	Date Collected:	12.20.19 09.48	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 12.00	Basis:	Wet Weight
Seq Number:	3111552				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	12.23.19 18.40	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	12.23.19 18.40	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	12.23.19 18.40	U	1
m,p-Xylenes	179601-23-1	<0.00395	0.00395	mg/kg	12.23.19 18.40	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	12.23.19 18.40	U	1
Xylenes, Total	1330-20-7	<0.00198	0.00198	mg/kg	12.23.19 18.40	U	1
Total BTEX		<0.00198	0.00198	mg/kg	12.23.19 18.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	12.23.19 18.40	
4-Bromofluorobenzene	460-00-4	99	%	70-130	12.23.19 18.40	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**FS05**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-005	Date Collected:	12.20.19 09.51	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 13.11	Basis:	Wet Weight
Seq Number:	3111556				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**76.8**	49.9	mg/kg	12.23.19 18.38		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.23.19 13.00	Basis:	Wet Weight
Seq Number:	3111569				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	12.23.19 15.07	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	12.23.19 15.07	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	12.23.19 15.07	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	12.23.19 15.07	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	12.23.19 15.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	12.23.19 15.07	
o-Terphenyl	84-15-1	100	%	70-135	12.23.19 15.07	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**FS05**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-005	Date Collected:	12.20.19 09.51	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 12.00	Basis:	Wet Weight
Seq Number:	3111552				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.23.19 18.57	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.23.19 18.57	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.23.19 18.57	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	12.23.19 18.57	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.23.19 18.57	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	12.23.19 18.57	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.23.19 18.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	70-130	12.23.19 18.57	
1,4-Difluorobenzene	540-36-3	98	%	70-130	12.23.19 18.57	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**FS06**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-006	Date Collected:	12.20.19 10.16	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 13.11	Basis:	Wet Weight
Seq Number:	3111556				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**61.7**	49.4	mg/kg	12.23.19 18.55		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.23.19 13.00	Basis:	Wet Weight
Seq Number:	3111569				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	12.23.19 15.07	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	12.23.19 15.07	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	12.23.19 15.07	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	12.23.19 15.07	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	12.23.19 15.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	12.23.19 15.07	
o-Terphenyl	84-15-1	94	%	70-135	12.23.19 15.07	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**FS06**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-006	Date Collected:	12.20.19 10.16	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 12.00	Basis:	Wet Weight
Seq Number:	3111552				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.23.19 19.15	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.23.19 19.15	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	12.23.19 19.15	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	12.23.19 19.15	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	12.23.19 19.15	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	12.23.19 19.15	U	1
Total BTEX		<0.00199	0.00199	mg/kg	12.23.19 19.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	12.23.19 19.15	
4-Bromofluorobenzene	460-00-4	110	%	70-130	12.23.19 19.15	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**FS07**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-007	Date Collected:	12.20.19 10.25	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 13.11	Basis:	Wet Weight
Seq Number:	3111556				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**321**	49.3	mg/kg	12.23.19 19.01		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.23.19 13.00	Basis:	Wet Weight
Seq Number:	3111569				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	12.23.19 15.26	U	1
Diesel Range Organics (DRO)	C10C28DRO	**83.2**	49.8	mg/kg	12.23.19 15.26		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	12.23.19 15.26	U	1
Total GRO-DRO	PHC628	**83.2**	49.8	mg/kg	12.23.19 15.26		1
Total TPH	PHC635	**83.2**	49.8	mg/kg	12.23.19 15.26		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	12.23.19 15.26	
o-Terphenyl	84-15-1	100	%	70-135	12.23.19 15.26	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**FS07**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-007	Date Collected:	12.20.19 10.25	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 12.00	Basis:	Wet Weight
Seq Number:	3111552				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	12.23.19 19.32	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	12.23.19 19.32	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	12.23.19 19.32	U	1
m,p-Xylenes	179601-23-1	<0.00395	0.00395	mg/kg	12.23.19 19.32	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	12.23.19 19.32	U	1
Xylenes, Total	1330-20-7	<0.00198	0.00198	mg/kg	12.23.19 19.32	U	1
Total BTEX		<0.00198	0.00198	mg/kg	12.23.19 19.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	109	%	70-130	12.23.19 19.32	
1,4-Difluorobenzene	540-36-3	103	%	70-130	12.23.19 19.32	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**FS08**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-008	Date Collected:	12.20.19 10.29	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 13.11	Basis:	Wet Weight
Seq Number:	3111556				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**38.1**	9.92	mg/kg	12.23.19 19.06		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.23.19 13.00	Basis:	Wet Weight
Seq Number:	3111569				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	12.23.19 15.26	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	12.23.19 15.26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	12.23.19 15.26	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	12.23.19 15.26	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	12.23.19 15.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	12.23.19 15.26	
o-Terphenyl	84-15-1	95	%	70-135	12.23.19 15.26	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**FS08**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-008	Date Collected:	12.20.19 10.29	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 12.00	Basis:	Wet Weight
Seq Number:	3111552				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	12.23.19 19.49	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	12.23.19 19.49	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	12.23.19 19.49	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	12.23.19 19.49	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	12.23.19 19.49	U	1
Xylenes, Total	1330-20-7	<0.00198	0.00198	mg/kg	12.23.19 19.49	U	1
Total BTEX		<0.00198	0.00198	mg/kg	12.23.19 19.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	12.23.19 19.49	
4-Bromofluorobenzene	460-00-4	104	%	70-130	12.23.19 19.49	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**FS09**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-009	Date Collected:	12.20.19 10.32	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 13.11	Basis:	Wet Weight
Seq Number:	3111556				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**20.4**	9.88	mg/kg	12.23.19 19.12		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.23.19 13.00	Basis:	Wet Weight
Seq Number:	3111569				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	12.23.19 15.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	12.23.19 15.46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	12.23.19 15.46	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	12.23.19 15.46	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	12.23.19 15.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	12.23.19 15.46	
o-Terphenyl	84-15-1	109	%	70-135	12.23.19 15.46	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**FS09**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-009	Date Collected:	12.20.19 10.32	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 12.00	Basis:	Wet Weight
Seq Number:	3111552				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.23.19 20.07	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.23.19 20.07	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	12.23.19 20.07	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	12.23.19 20.07	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	12.23.19 20.07	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	12.23.19 20.07	U	1
Total BTEX		<0.00199	0.00199	mg/kg	12.23.19 20.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	12.23.19 20.07	
4-Bromofluorobenzene	460-00-4	108	%	70-130	12.23.19 20.07	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**FS10**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-010	Date Collected:	12.20.19 10.35	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 13.11	Basis:	Wet Weight
Seq Number:	3111556				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**30.0**	9.98	mg/kg	12.23.19 19.18		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.23.19 13.00	Basis:	Wet Weight
Seq Number:	3111569				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	12.23.19 15.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	12.23.19 15.46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	12.23.19 15.46	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	12.23.19 15.46	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	12.23.19 15.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	12.23.19 15.46	
o-Terphenyl	84-15-1	97	%	70-135	12.23.19 15.46	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**FS10**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-010	Date Collected:	12.20.19 10.35	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 12.00	Basis:	Wet Weight
Seq Number:	3111552				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.23.19 20.24	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.23.19 20.24	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	12.23.19 20.24	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	12.23.19 20.24	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	12.23.19 20.24	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	12.23.19 20.24	U	1
Total BTEX		<0.00199	0.00199	mg/kg	12.23.19 20.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	12.23.19 20.24	
4-Bromofluorobenzene	460-00-4	104	%	70-130	12.23.19 20.24	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id: **FS11** Matrix: Soil Date Received:12.23.19 11.00

Lab Sample Id: 647387-011 Date Collected: 12.20.19 10.55 Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 12.23.19 13.11 Basis: Wet Weight

Seq Number: 3111556

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**42.2**	9.86	mg/kg	12.23.19 19.24		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 12.23.19 13.00 Basis: Wet Weight

Seq Number: 3111569

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.23.19 16.06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.23.19 16.06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.23.19 16.06	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	12.23.19 16.06	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	12.23.19 16.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	12.23.19 16.06	
o-Terphenyl	84-15-1	106	%	70-135	12.23.19 16.06	

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LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**FS11**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-011	Date Collected:	12.20.19 10.55	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 12.00	Basis:	Wet Weight
Seq Number:	3111552				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.23.19 21.33	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.23.19 21.33	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.23.19 21.33	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	12.23.19 21.33	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.23.19 21.33	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	12.23.19 21.33	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.23.19 21.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	70-130	12.23.19 21.33	
1,4-Difluorobenzene	540-36-3	101	%	70-130	12.23.19 21.33	

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LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**FS12**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-012	Date Collected:	12.20.19 11.02	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 13.11	Basis:	Wet Weight
Seq Number:	3111556				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**52.8**	9.98	mg/kg	12.23.19 19.30		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.23.19 13.00	Basis:	Wet Weight
Seq Number:	3111569				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	12.23.19 16.26	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	12.23.19 16.26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	12.23.19 16.26	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	12.23.19 16.26	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	12.23.19 16.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	12.23.19 16.26	
o-Terphenyl	84-15-1	108	%	70-135	12.23.19 16.26	

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LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**FS12**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-012	Date Collected:	12.20.19 11.02	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 12.00	Basis:	Wet Weight
Seq Number:	3111552				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.23.19 21.51	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.23.19 21.51	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.23.19 21.51	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	12.23.19 21.51	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.23.19 21.51	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	12.23.19 21.51	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.23.19 21.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	12.23.19 21.51	
4-Bromofluorobenzene	460-00-4	105	%	70-130	12.23.19 21.51	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**FS13**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-013	Date Collected:	12.20.19 11.08	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 15.00	Basis:	Wet Weight
Seq Number:	3111557				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**60.4**	9.98	mg/kg	12.23.19 20.04		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.23.19 13.00	Basis:	Wet Weight
Seq Number:	3111569				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	12.23.19 16.26	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	12.23.19 16.26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	12.23.19 16.26	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	12.23.19 16.26	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	12.23.19 16.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	12.23.19 16.26	
o-Terphenyl	84-15-1	101	%	70-135	12.23.19 16.26	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**FS13**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-013	Date Collected:	12.20.19 11.08	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 12.00	Basis:	Wet Weight
Seq Number:	3111552				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	12.23.19 22.08	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	12.23.19 22.08	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	12.23.19 22.08	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	12.23.19 22.08	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	12.23.19 22.08	U	1
Xylenes, Total	1330-20-7	<0.00198	0.00198	mg/kg	12.23.19 22.08	U	1
Total BTEX		<0.00198	0.00198	mg/kg	12.23.19 22.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	70-130	12.23.19 22.08	
1,4-Difluorobenzene	540-36-3	103	%	70-130	12.23.19 22.08	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**FS14**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-014	Date Collected:	12.20.19 11.10	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 15.00	Basis:	Wet Weight
Seq Number:	3111557				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**42.7**	10.0	mg/kg	12.23.19 20.22		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.23.19 13.00	Basis:	Wet Weight
Seq Number:	3111569				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	12.23.19 16.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	12.23.19 16.46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	12.23.19 16.46	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	12.23.19 16.46	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	12.23.19 16.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	12.23.19 16.46	
o-Terphenyl	84-15-1	102	%	70-135	12.23.19 16.46	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**FS14**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-014	Date Collected:	12.20.19 11.10	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 12.00	Basis:	Wet Weight
Seq Number:	3111552				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	12.23.19 22.26	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	12.23.19 22.26	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	12.23.19 22.26	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	12.23.19 22.26	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	12.23.19 22.26	U	1
Xylenes, Total	1330-20-7	<0.00202	0.00202	mg/kg	12.23.19 22.26	U	1
Total BTEX		<0.00202	0.00202	mg/kg	12.23.19 22.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	12.23.19 22.26	
4-Bromofluorobenzene	460-00-4	100	%	70-130	12.23.19 22.26	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**FS15**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-015	Date Collected:	12.20.19 11.20	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 15.00	Basis:	Wet Weight
Seq Number:	3111557				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**27.6**	9.94	mg/kg	12.23.19 20.27		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.23.19 13.00	Basis:	Wet Weight
Seq Number:	3111569				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	12.23.19 16.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	12.23.19 16.46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	12.23.19 16.46	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	12.23.19 16.46	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	12.23.19 16.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	12.23.19 16.46	
o-Terphenyl	84-15-1	113	%	70-135	12.23.19 16.46	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**FS15**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-015	Date Collected:	12.20.19 11.20	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 12.00	Basis:	Wet Weight
Seq Number:	3111552				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	12.23.19 22.43	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	12.23.19 22.43	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	12.23.19 22.43	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	12.23.19 22.43	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	12.23.19 22.43	U	1
Xylenes, Total	1330-20-7	<0.00202	0.00202	mg/kg	12.23.19 22.43	U	1
Total BTEX		<0.00202	0.00202	mg/kg	12.23.19 22.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	107	%	70-130	12.23.19 22.43	
1,4-Difluorobenzene	540-36-3	103	%	70-130	12.23.19 22.43	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**FS16**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-016	Date Collected:	12.20.19 11.22	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 15.00	Basis:	Wet Weight
Seq Number:	3111557				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**28.0**	9.88	mg/kg	12.23.19 20.33		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.23.19 13.00	Basis:	Wet Weight
Seq Number:	3111569				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.23.19 17.06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.23.19 17.06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.23.19 17.06	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	12.23.19 17.06	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	12.23.19 17.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	12.23.19 17.06	
o-Terphenyl	84-15-1	109	%	70-135	12.23.19 17.06	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**FS16**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-016	Date Collected:	12.20.19 11.22	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 12.00	Basis:	Wet Weight
Seq Number:	3111552				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.23.19 23.00	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.23.19 23.00	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	12.23.19 23.00	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	12.23.19 23.00	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	12.23.19 23.00	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	12.23.19 23.00	U	1
Total BTEX		<0.00199	0.00199	mg/kg	12.23.19 23.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	12.23.19 23.00	
4-Bromofluorobenzene	460-00-4	104	%	70-130	12.23.19 23.00	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**FS17**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-017	Date Collected:	12.20.19 11.46	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 15.00	Basis:	Wet Weight
Seq Number:	3111557				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**30.9**	9.98	mg/kg	12.23.19 20.39		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.23.19 13.00	Basis:	Wet Weight
Seq Number:	3111569				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	12.23.19 17.06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	12.23.19 17.06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	12.23.19 17.06	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	12.23.19 17.06	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	12.23.19 17.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	12.23.19 17.06	
o-Terphenyl	84-15-1	97	%	70-135	12.23.19 17.06	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**FS17**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-017	Date Collected:	12.20.19 11.46	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 12.00	Basis:	Wet Weight
Seq Number:	3111552				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.23.19 23.18	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.23.19 23.18	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	12.23.19 23.18	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	12.23.19 23.18	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	12.23.19 23.18	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	12.23.19 23.18	U	1
Total BTEX		<0.00199	0.00199	mg/kg	12.23.19 23.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	12.23.19 23.18	
4-Bromofluorobenzene	460-00-4	107	%	70-130	12.23.19 23.18	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**FS18**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-018	Date Collected:	12.20.19 11.48	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 15.00	Basis:	Wet Weight
Seq Number:	3111557				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**80.5**	9.96	mg/kg	12.23.19 20.56		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.23.19 13.00	Basis:	Wet Weight
Seq Number:	3111569				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	12.23.19 17.26	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	12.23.19 17.26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	12.23.19 17.26	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	12.23.19 17.26	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	12.23.19 17.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	12.23.19 17.26	
o-Terphenyl	84-15-1	102	%	70-135	12.23.19 17.26	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**FS18**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-018	Date Collected:	12.20.19 11.48	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 12.00	Basis:	Wet Weight
Seq Number:	3111552				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.23.19 23.35	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.23.19 23.35	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	12.23.19 23.35	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	12.23.19 23.35	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	12.23.19 23.35	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	12.23.19 23.35	U	1
Total BTEX		<0.00199	0.00199	mg/kg	12.23.19 23.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	12.23.19 23.35	
4-Bromofluorobenzene	460-00-4	105	%	70-130	12.23.19 23.35	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**FS19**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-019	Date Collected:	12.20.19 11.51	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 15.00	Basis:	Wet Weight
Seq Number:	3111557				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**13.7**	9.92	mg/kg	12.23.19 21.02		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.23.19 13.00	Basis:	Wet Weight
Seq Number:	3111569				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	12.23.19 17.26	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	12.23.19 17.26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	12.23.19 17.26	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	12.23.19 17.26	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	12.23.19 17.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	12.23.19 17.26	
o-Terphenyl	84-15-1	96	%	70-135	12.23.19 17.26	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**FS19**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-019	Date Collected:	12.20.19 11.51	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 12.00	Basis:	Wet Weight
Seq Number:	3111552				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.23.19 23.53	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.23.19 23.53	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.23.19 23.53	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.23.19 23.53	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.23.19 23.53	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	12.23.19 23.53	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.23.19 23.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	12.23.19 23.53	
4-Bromofluorobenzene	460-00-4	104	%	70-130	12.23.19 23.53	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**FS20**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-020	Date Collected:	12.20.19 12.03	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 15.00	Basis:	Wet Weight
Seq Number:	3111557				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**99.9**	9.98	mg/kg	12.23.19 21.08		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.23.19 13.00	Basis:	Wet Weight
Seq Number:	3111569				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	12.23.19 17.45	U	1
Diesel Range Organics (DRO)	C10C28DRO	**75.9**	50.3	mg/kg	12.23.19 17.45		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	12.23.19 17.45	U	1
Total GRO-DRO	PHC628	**75.9**	50.3	mg/kg	12.23.19 17.45		1
Total TPH	PHC635	**75.9**	50.3	mg/kg	12.23.19 17.45		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	12.23.19 17.45	
o-Terphenyl	84-15-1	108	%	70-135	12.23.19 17.45	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**FS20**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-020	Date Collected:	12.20.19 12.03	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 12.00	Basis:	Wet Weight
Seq Number:	3111552				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.24.19 00.10	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.24.19 00.10	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	12.24.19 00.10	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	12.24.19 00.10	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	12.24.19 00.10	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	12.24.19 00.10	U	1
Total BTEX		<0.00199	0.00199	mg/kg	12.24.19 00.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	107	%	70-130	12.24.19 00.10	
1,4-Difluorobenzene	540-36-3	102	%	70-130	12.24.19 00.10	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**FS21**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-021	Date Collected:	12.20.19 12.06	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 15.00	Basis:	Wet Weight
Seq Number:	3111557				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**17.5**	9.88	mg/kg	12.23.19 21.14		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.23.19 15.00	Basis:	Wet Weight
Seq Number:	3111593				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	12.23.19 20.04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	12.23.19 20.04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	12.23.19 20.04	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	12.23.19 20.04	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	12.23.19 20.04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	12.23.19 20.04	
o-Terphenyl	84-15-1	94	%	70-135	12.23.19 20.04	

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LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**FS21**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-021	Date Collected:	12.20.19 12.06	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 12.00	Basis:	Wet Weight
Seq Number:	3111553				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.23.19 20.20	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.23.19 20.20	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.23.19 20.20	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	12.23.19 20.20	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.23.19 20.20	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	12.23.19 20.20	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.23.19 20.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	12.23.19 20.20	
4-Bromofluorobenzene	460-00-4	122	%	70-130	12.23.19 20.20	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-022	Date Collected:	12.20.19 12.30	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 15.00	Basis:	Wet Weight
Seq Number:	3111557				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**58.8**	10.0	mg/kg	12.23.19 21.21		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.23.19 15.00	Basis:	Wet Weight
Seq Number:	3111593				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	12.23.19 20.24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	12.23.19 20.24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	12.23.19 20.24	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	12.23.19 20.24	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	12.23.19 20.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	12.23.19 20.24	
o-Terphenyl	84-15-1	108	%	70-135	12.23.19 20.24	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-022	Date Collected:	12.20.19 12.30	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 12.00	Basis:	Wet Weight
Seq Number:	3111553				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	12.23.19 20.39	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	12.23.19 20.39	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	12.23.19 20.39	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	12.23.19 20.39	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	12.23.19 20.39	U	1
Xylenes, Total	1330-20-7	<0.00198	0.00198	mg/kg	12.23.19 20.39	U	1
Total BTEX		<0.00198	0.00198	mg/kg	12.23.19 20.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	121	%	70-130	12.23.19 20.39	
1,4-Difluorobenzene	540-36-3	102	%	70-130	12.23.19 20.39	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-023	Date Collected:	12.20.19 12.39	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 15.00	Basis:	Wet Weight
Seq Number:	3111557				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**64.3**	10.1	mg/kg	12.23.19 21.27		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.23.19 15.00	Basis:	Wet Weight
Seq Number:	3111593				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	12.23.19 20.44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	12.23.19 20.44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	12.23.19 20.44	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	12.23.19 20.44	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	12.23.19 20.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	12.23.19 20.44	
o-Terphenyl	84-15-1	104	%	70-135	12.23.19 20.44	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-023	Date Collected:	12.20.19 12.39	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 12.00	Basis:	Wet Weight
Seq Number:	3111553				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.23.19 21.42	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.23.19 21.42	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	12.23.19 21.42	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	12.23.19 21.42	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	12.23.19 21.42	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	12.23.19 21.42	U	1
Total BTEX		<0.00199	0.00199	mg/kg	12.23.19 21.42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	97	%	70-130	12.23.19 21.42	
4-Bromofluorobenzene	460-00-4	108	%	70-130	12.23.19 21.42	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-024	Date Collected:	12.20.19 12.47	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 15.00	Basis:	Wet Weight
Seq Number:	3111557				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**16.5**	9.98	mg/kg	12.23.19 21.46		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.23.19 15.00	Basis:	Wet Weight
Seq Number:	3111593				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.23.19 20.44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.23.19 20.44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.23.19 20.44	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	12.23.19 20.44	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	12.23.19 20.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	12.23.19 20.44	
o-Terphenyl	84-15-1	97	%	70-135	12.23.19 20.44	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-024	Date Collected:	12.20.19 12.47	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 12.00	Basis:	Wet Weight
Seq Number:	3111553				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.23.19 22.01	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.23.19 22.01	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.23.19 22.01	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.23.19 22.01	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.23.19 22.01	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	12.23.19 22.01	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.23.19 22.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	12.23.19 22.01	
4-Bromofluorobenzene	460-00-4	121	%	70-130	12.23.19 22.01	

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LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**SS04**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-025	Date Collected:	12.20.19 12.50	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 15.00	Basis:	Wet Weight
Seq Number:	3111557				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.96	9.96	mg/kg	12.23.19 21.52	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.23.19 15.00	Basis:	Wet Weight
Seq Number:	3111593				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	12.23.19 21.04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	12.23.19 21.04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	12.23.19 21.04	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	12.23.19 21.04	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	12.23.19 21.04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	12.23.19 21.04	
o-Terphenyl	84-15-1	105	%	70-135	12.23.19 21.04	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**SS04**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-025	Date Collected:	12.20.19 12.50	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 12.00	Basis:	Wet Weight
Seq Number:	3111553				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	12.23.19 22.21	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	12.23.19 22.21	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	12.23.19 22.21	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	12.23.19 22.21	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	12.23.19 22.21	U	1
Xylenes, Total	1330-20-7	<0.00201	0.00201	mg/kg	12.23.19 22.21	U	1
Total BTEX		<0.00201	0.00201	mg/kg	12.23.19 22.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	12.23.19 22.21	
4-Bromofluorobenzene	460-00-4	118	%	70-130	12.23.19 22.21	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**FS22**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-026	Date Collected:	12.20.19 13.16	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 15.00	Basis:	Wet Weight
Seq Number:	3111557				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**228**	99.8	mg/kg	12.23.19 22.11		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.23.19 15.00	Basis:	Wet Weight
Seq Number:	3111593				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	12.23.19 21.04	U	1
Diesel Range Organics (DRO)	C10C28DRO	**615**	49.9	mg/kg	12.23.19 21.04		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**74.7**	49.9	mg/kg	12.23.19 21.04		1
Total GRO-DRO	PHC628	**615**	49.9	mg/kg	12.23.19 21.04		1
Total TPH	PHC635	**690**	49.9	mg/kg	12.23.19 21.04		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	12.23.19 21.04	
o-Terphenyl	84-15-1	100	%	70-135	12.23.19 21.04	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**FS22**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-026	Date Collected:	12.20.19 13.16	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 12.00	Basis:	Wet Weight
Seq Number:	3111553				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.23.19 22.40	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.23.19 22.40	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.23.19 22.40	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	12.23.19 22.40	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.23.19 22.40	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	12.23.19 22.40	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.23.19 22.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	111	%	70-130	12.23.19 22.40	
1,4-Difluorobenzene	540-36-3	98	%	70-130	12.23.19 22.40	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**FS23**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-027	Date Collected:	12.20.19 13.19	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 15.00	Basis:	Wet Weight
Seq Number:	3111557				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**19.8**	9.94	mg/kg	12.23.19 22.17		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.23.19 15.00	Basis:	Wet Weight
Seq Number:	3111593				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.23.19 21.24	U	1
Diesel Range Organics (DRO)	C10C28DRO	**1110**	50.0	mg/kg	12.23.19 21.24		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**94.3**	50.0	mg/kg	12.23.19 21.24		1
Total GRO-DRO	PHC628	**1110**	50.0	mg/kg	12.23.19 21.24		1
Total TPH	PHC635	**1200**	50.0	mg/kg	12.23.19 21.24		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	12.23.19 21.24	
o-Terphenyl	84-15-1	108	%	70-135	12.23.19 21.24	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**FS23**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-027	Date Collected:	12.20.19 13.19	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 12.00	Basis:	Wet Weight
Seq Number:	3111553				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0200	0.0200	mg/kg	12.23.19 22.59	U	1
Toluene	108-88-3	<0.0200	0.0200	mg/kg	12.23.19 22.59	U	1
Ethylbenzene	100-41-4	<0.0200	0.0200	mg/kg	12.23.19 22.59	U	1
m,p-Xylenes	179601-23-1	<0.0400	0.0400	mg/kg	12.23.19 22.59	U	1
o-Xylene	95-47-6	**0.188**	0.0200	mg/kg	12.23.19 22.59		1
Xylenes, Total	1330-20-7	**0.188**	0.0200	mg/kg	12.23.19 22.59		1
Total BTEX		**0.188**	0.0200	mg/kg	12.23.19 22.59		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	12.23.19 22.59	
4-Bromofluorobenzene	460-00-4	116	%	70-130	12.23.19 22.59	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**FS24**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-028	Date Collected:	12.20.19 13.45	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 15.00	Basis:	Wet Weight
Seq Number:	3111557				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**193**	49.9	mg/kg	12.23.19 22.23		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.23.19 15.00	Basis:	Wet Weight
Seq Number:	3111593				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	12.23.19 21.24	U	1
Diesel Range Organics (DRO)	C10C28DRO	**492**	50.1	mg/kg	12.23.19 21.24		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**63.7**	50.1	mg/kg	12.23.19 21.24		1
Total GRO-DRO	PHC628	**492**	50.1	mg/kg	12.23.19 21.24		1
Total TPH	PHC635	**556**	50.1	mg/kg	12.23.19 21.24		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	12.23.19 21.24	
o-Terphenyl	84-15-1	100	%	70-135	12.23.19 21.24	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**FS24**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-028	Date Collected:	12.20.19 13.45	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 12.00	Basis:	Wet Weight
Seq Number:	3111553				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	12.23.19 23.18	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	12.23.19 23.18	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	12.23.19 23.18	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	12.23.19 23.18	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	12.23.19 23.18	U	1
Xylenes, Total	1330-20-7	<0.00201	0.00201	mg/kg	12.23.19 23.18	U	1
Total BTEX		<0.00201	0.00201	mg/kg	12.23.19 23.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	113	%	70-130	12.23.19 23.18	
1,4-Difluorobenzene	540-36-3	99	%	70-130	12.23.19 23.18	

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LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**FS25**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-029	Date Collected:	12.20.19 13.47	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 15.00	Basis:	Wet Weight
Seq Number:	3111557				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**341**	49.6	mg/kg	12.23.19 22.29		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.23.19 15.00	Basis:	Wet Weight
Seq Number:	3111593				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	12.23.19 21.43	U	1
Diesel Range Organics (DRO)	C10C28DRO	**386**	49.9	mg/kg	12.23.19 21.43		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**50.2**	49.9	mg/kg	12.23.19 21.43		1
Total GRO-DRO	PHC628	**386**	49.9	mg/kg	12.23.19 21.43		1
Total TPH	PHC635	**436**	49.9	mg/kg	12.23.19 21.43		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	12.23.19 21.43	
o-Terphenyl	84-15-1	107	%	70-135	12.23.19 21.43	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**FS25**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-029	Date Collected:	12.20.19 13.47	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 12.00	Basis:	Wet Weight
Seq Number:	3111553				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.23.19 23.37	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.23.19 23.37	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	12.23.19 23.37	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	12.23.19 23.37	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	12.23.19 23.37	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	12.23.19 23.37	U	1
Total BTEX		<0.00199	0.00199	mg/kg	12.23.19 23.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	124	%	70-130	12.23.19 23.37	
1,4-Difluorobenzene	540-36-3	103	%	70-130	12.23.19 23.37	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**FS26**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-030	Date Collected:	12.20.19 14.00	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 15.00	Basis:	Wet Weight
Seq Number:	3111557				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**407**	10.0	mg/kg	12.23.19 22.36		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.23.19 15.00	Basis:	Wet Weight
Seq Number:	3111593				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	12.23.19 21.43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	12.23.19 21.43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	12.23.19 21.43	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	12.23.19 21.43	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	12.23.19 21.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	12.23.19 21.43	
o-Terphenyl	84-15-1	101	%	70-135	12.23.19 21.43	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**FS26**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-030	Date Collected:	12.20.19 14.00	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 12.00	Basis:	Wet Weight
Seq Number:	3111553				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	12.23.19 23.56	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	12.23.19 23.56	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	12.23.19 23.56	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	12.23.19 23.56	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	12.23.19 23.56	U	1
Xylenes, Total	1330-20-7	<0.00202	0.00202	mg/kg	12.23.19 23.56	U	1
Total BTEX		<0.00202	0.00202	mg/kg	12.23.19 23.56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	126	%	70-130	12.23.19 23.56	
1,4-Difluorobenzene	540-36-3	104	%	70-130	12.23.19 23.56	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**FS27**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-031	Date Collected:	12.20.19 14.02	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 15.00	Basis:	Wet Weight
Seq Number:	3111557				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1580**	49.3	mg/kg	12.23.19 22.42		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.23.19 15.00	Basis:	Wet Weight
Seq Number:	3111593				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	12.23.19 22.03	U	1
Diesel Range Organics (DRO)	C10C28DRO	**500**	50.1	mg/kg	12.23.19 22.03		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**87.8**	50.1	mg/kg	12.23.19 22.03		1
Total GRO-DRO	PHC628	**500**	50.1	mg/kg	12.23.19 22.03		1
Total TPH	PHC635	**588**	50.1	mg/kg	12.23.19 22.03		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	12.23.19 22.03	
o-Terphenyl	84-15-1	105	%	70-135	12.23.19 22.03	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**FS27**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-031	Date Collected:	12.20.19 14.02	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 12.00	Basis:	Wet Weight
Seq Number:	3111553				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.24.19 00.15	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.24.19 00.15	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	12.24.19 00.15	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	12.24.19 00.15	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	12.24.19 00.15	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	12.24.19 00.15	U	1
Total BTEX		<0.00199	0.00199	mg/kg	12.24.19 00.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	114	%	70-130	12.24.19 00.15	
1,4-Difluorobenzene	540-36-3	102	%	70-130	12.24.19 00.15	

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LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**FS28**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-032	Date Collected:	12.20.19 14.04	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 15.00	Basis:	Wet Weight
Seq Number:	3111557				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1570**	49.9	mg/kg	12.23.19 22.48		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.23.19 15.00	Basis:	Wet Weight
Seq Number:	3111593				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	12.23.19 22.03	U	1
Diesel Range Organics (DRO)	C10C28DRO	**736**	50.1	mg/kg	12.23.19 22.03		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**100**	50.1	mg/kg	12.23.19 22.03		1
Total GRO-DRO	PHC628	**736**	50.1	mg/kg	12.23.19 22.03		1
Total TPH	PHC635	**836**	50.1	mg/kg	12.23.19 22.03		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	12.23.19 22.03	
o-Terphenyl	84-15-1	113	%	70-135	12.23.19 22.03	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**FS28**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-032	Date Collected:	12.20.19 14.04	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 12.00	Basis:	Wet Weight
Seq Number:	3111553				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	12.24.19 00.34	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	12.24.19 00.34	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	12.24.19 00.34	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	12.24.19 00.34	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	12.24.19 00.34	U	1
Xylenes, Total	1330-20-7	<0.00202	0.00202	mg/kg	12.24.19 00.34	U	1
Total BTEX		<0.00202	0.00202	mg/kg	12.24.19 00.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	120	%	70-130	12.24.19 00.34	
1,4-Difluorobenzene	540-36-3	105	%	70-130	12.24.19 00.34	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id: **BH01** Matrix: Soil Date Received:12.23.19 11.00

Lab Sample Id: 647387-033 Date Collected: 12.20.19 14.28 Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 12.23.19 17.00 Basis: Wet Weight

Seq Number: 3111567

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**35.2**	10.0	mg/kg	12.23.19 23.25		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 12.23.19 17.00 Basis: Wet Weight

Seq Number: 3111614

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	12.23.19 23.02	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	12.23.19 23.02	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	12.23.19 23.02	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	12.23.19 23.02	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	12.23.19 23.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	12.23.19 23.02	
o-Terphenyl	84-15-1	100	%	70-135	12.23.19 23.02	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**BH01**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-033	Date Collected:	12.20.19 14.28	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.24.19 08.07	Basis:	Wet Weight
Seq Number:	3111623				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.24.19 11.13	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.24.19 11.13	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	12.24.19 11.13	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	12.24.19 11.13	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	12.24.19 11.13	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	12.24.19 11.13	U	1
Total BTEX		<0.00199	0.00199	mg/kg	12.24.19 11.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	12.24.19 11.13	
1,4-Difluorobenzene	540-36-3	99	%	70-130	12.24.19 11.13	

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LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**BH01A**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-034	Date Collected:	12.20.19 14.30	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 17.00	Basis:	Wet Weight
Seq Number:	3111567				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**26.0**	9.90	mg/kg	12.23.19 23.44		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.23.19 17.00	Basis:	Wet Weight
Seq Number:	3111614				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	12.23.19 23.22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	12.23.19 23.22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	12.23.19 23.22	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	12.23.19 23.22	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	12.23.19 23.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	12.23.19 23.22	
o-Terphenyl	84-15-1	94	%	70-135	12.23.19 23.22	

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LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**BH01A**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-034	Date Collected:	12.20.19 14.30	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.24.19 08.07	Basis:	Wet Weight
Seq Number:	3111623				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	12.24.19 11.31	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	12.24.19 11.31	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	12.24.19 11.31	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	12.24.19 11.31	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	12.24.19 11.31	U	1
Xylenes, Total	1330-20-7	<0.00198	0.00198	mg/kg	12.24.19 11.31	U	1
Total BTEX		<0.00198	0.00198	mg/kg	12.24.19 11.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	70-130	12.24.19 11.31	
1,4-Difluorobenzene	540-36-3	99	%	70-130	12.24.19 11.31	

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LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**BH02**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-035	Date Collected:	12.20.19 15.12	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 17.00	Basis:	Wet Weight
Seq Number:	3111567				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**644**	49.9	mg/kg	12.23.19 23.50		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.24.19 12.00	Basis:	Wet Weight
Seq Number:	3111671				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	12.24.19 12.36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	12.24.19 12.36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	12.24.19 12.36	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	12.24.19 12.36	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	12.24.19 12.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	12.24.19 12.36	
o-Terphenyl	84-15-1	108	%	70-135	12.24.19 12.36	

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LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**BH02**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-035	Date Collected:	12.20.19 15.12	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.24.19 08.07	Basis:	Wet Weight
Seq Number:	3111623				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00197	0.00197	mg/kg	12.24.19 11.48	U	1
Toluene	108-88-3	<0.00197	0.00197	mg/kg	12.24.19 11.48	U	1
Ethylbenzene	100-41-4	<0.00197	0.00197	mg/kg	12.24.19 11.48	U	1
m,p-Xylenes	179601-23-1	<0.00394	0.00394	mg/kg	12.24.19 11.48	U	1
o-Xylene	95-47-6	<0.00197	0.00197	mg/kg	12.24.19 11.48	U	1
Xylenes, Total	1330-20-7	<0.00197	0.00197	mg/kg	12.24.19 11.48	U	1
Total BTEX		<0.00197	0.00197	mg/kg	12.24.19 11.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	107	%	70-130	12.24.19 11.48	
1,4-Difluorobenzene	540-36-3	102	%	70-130	12.24.19 11.48	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**BH02A**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-036	Date Collected:	12.20.19 15.23	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.23.19 17.00	Basis:	Wet Weight
Seq Number:	3111567				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**109**	9.96	mg/kg	12.23.19 23.57		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.24.19 12.00	Basis:	Wet Weight
Seq Number:	3111671				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	12.24.19 12.56	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	12.24.19 12.56	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	12.24.19 12.56	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	12.24.19 12.56	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	12.24.19 12.56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	12.24.19 12.56	
o-Terphenyl	84-15-1	98	%	70-135	12.24.19 12.56	

Certificate of Analytical Results 647387

LT Environmental, Inc., Arvada, CO

RDX FEDERAL 21-23

Sample Id:	**BH02A**	Matrix:	Soil	Date Received:	12.23.19 11.00
Lab Sample Id:	647387-036	Date Collected:	12.20.19 15.23	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.24.19 08.07	Basis:	Wet Weight
Seq Number:	3111623				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	12.24.19 10.56	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	12.24.19 10.56	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	12.24.19 10.56	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	12.24.19 10.56	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	12.24.19 10.56	U	1
Xylenes, Total	1330-20-7	<0.00198	0.00198	mg/kg	12.24.19 10.56	U	1
Total BTEX		<0.00198	0.00198	mg/kg	12.24.19 10.56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	102	%	70-130	12.24.19 10.56	
1,4-Difluorobenzene	540-36-3	102	%	70-130	12.24.19 10.56	

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 647387

LT Environmental, Inc.

RDX FEDERAL 21-23

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3111556 Matrix: Solid Date Prep: 12.23.19
MB Sample Id: 7693186-1-BLK LCS Sample Id: 7693186-1-BKS LCSD Sample Id: 7693186-1-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	274	110	275	110	90-110	0	20	mg/kg	12.23.19 19:53	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3111557 Matrix: Solid Date Prep: 12.23.19
MB Sample Id: 7693187-1-BLK LCS Sample Id: 7693187-1-BKS LCSD Sample Id: 7693187-1-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	274	110	275	110	90-110	0	20	mg/kg	12.23.19 19:53	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3111567 Matrix: Solid Date Prep: 12.23.19
MB Sample Id: 7693188-1-BLK LCS Sample Id: 7693188-1-BKS LCSD Sample Id: 7693188-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	300	279	93	276	92	90-110	1	20	mg/kg	12.23.19 23:13	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3111556 Matrix: Soil Date Prep: 12.23.19
Parent Sample Id: 647383-001 MS Sample Id: 647383-001 S MSD Sample Id: 647383-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	6740	201	6860	60	6850	55	90-110	0	20	mg/kg	12.23.19 16:59	X

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3111556 Matrix: Soil Date Prep: 12.23.19
Parent Sample Id: 647387-003 MS Sample Id: 647387-003 S MSD Sample Id: 647387-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	102	198	311	106	309	105	90-110	1	20	mg/kg	12.23.19 18:20	

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 647387

LT Environmental, Inc.

RDX FEDERAL 21-23

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3111557 — Matrix: Soil — Date Prep: 12.23.19
Parent Sample Id: 647387-013 — MS Sample Id: 647387-013 S — MSD Sample Id: 647387-013 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	60.4	199	250	95	236	88	90-110	6	20	mg/kg	12.23.19 20:10	X

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3111557 — Matrix: Soil — Date Prep: 12.23.19
Parent Sample Id: 647387-023 — MS Sample Id: 647387-023 S — MSD Sample Id: 647387-023 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	64.3	200	292	114	289	113	90-110	1	20	mg/kg	12.23.19 21:33	X

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3111567 — Matrix: Soil — Date Prep: 12.23.19
Parent Sample Id: 647387-033 — MS Sample Id: 647387-033 S — MSD Sample Id: 647387-033 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	35.2	201	264	114	263	114	90-110	0	20	mg/kg	12.23.19 23:32	X

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3111567 — Matrix: Soil — Date Prep: 12.23.19
Parent Sample Id: 647419-007 — MS Sample Id: 647419-007 S — MSD Sample Id: 647419-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	3120	199	3280	80	3270	75	90-110	0	20	mg/kg	12.24.19 00:59	X

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3111569 — Matrix: Solid — Date Prep: 12.23.19
MB Sample Id: 7693197-1-BLK — LCS Sample Id: 7693197-1-BKS — LCSD Sample Id: 7693197-1-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	1270	127	1220	122	70-135	4	35	mg/kg	12.23.19 13:16	
Diesel Range Organics (DRO)	<50.0	1000	1350	135	1350	135	70-135	0	35	mg/kg	12.23.19 13:16	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	91		120		119		70-135	%	12.23.19 13:16
o-Terphenyl	93		109		112		70-135	%	12.23.19 13:16

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

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

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

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

QC Summary 647387

LT Environmental, Inc.

RDX FEDERAL 21-23

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3111593 — Matrix: Solid — Date Prep: 12.23.19
MB Sample Id: 7693201-1-BLK — LCS Sample Id: 7693201-1-BKS — LCSD Sample Id: 7693201-1-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)	<13.9	1000	1190	119	1250	125	70-135	5	35	mg/kg	12.23.19 18:05	
Diesel Range Organics (DRO)	<11.5	1000	1200	120	1250	125	70-135	4	35	mg/kg	12.23.19 18:05	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	99		116		129		70-135	%	12.23.19 18:05
o-Terphenyl	100		110		126		70-135	%	12.23.19 18:05

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3111614 — Matrix: Solid — Date Prep: 12.23.19
MB Sample Id: 7693217-1-BLK — LCS Sample Id: 7693217-1-BKS — LCSD Sample Id: 7693217-1-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)	<13.9	1000	1300	130	1240	124	70-135	5	35	mg/kg	12.23.19 22:43	
Diesel Range Organics (DRO)	<11.5	1000	1290	129	1260	126	70-135	2	35	mg/kg	12.23.19 22:43	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	94		116		115		70-135	%	12.23.19 22:43
o-Terphenyl	96		112		114		70-135	%	12.23.19 22:43

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3111671 — Matrix: Solid — Date Prep: 12.24.19
MB Sample Id: 7693227-1-BLK — LCS Sample Id: 7693227-1-BKS — LCSD Sample Id: 7693227-1-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)	<13.9	1000	1220	122	1230	123	70-135	1	35	mg/kg	12.24.19 12:16	
Diesel Range Organics (DRO)	<11.5	1000	1240	124	1260	126	70-135	2	35	mg/kg	12.24.19 12:16	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	95		128		111		70-135	%	12.24.19 12:16
o-Terphenyl	98		120		111		70-135	%	12.24.19 12:16

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3111569 — Matrix: Solid — Date Prep: 12.23.19
MB Sample Id: 7693197-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	12.23.19 12:56	

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 647387

LT Environmental, Inc.

RDX FEDERAL 21-23

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3111593 — Matrix: Solid — Date Prep: 12.23.19
MB Sample Id: 7693201-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	12.23.19 18:05	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3111614 — Matrix: Solid — Date Prep: 12.23.19
MB Sample Id: 7693217-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	12.23.19 22:23	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3111671 — Matrix: Solid — Date Prep: 12.24.19
MB Sample Id: 7693227-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	12.24.19 11:57	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3111569 — Matrix: Soil — Date Prep: 12.23.19
Parent Sample Id: 647387-001 — MS Sample Id: 647387-001 S — MSD Sample Id: 647387-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.9	998	1130	113	1230	123	70-135	8	35	mg/kg	12.23.19 14:07	
Diesel Range Organics (DRO)	64.9	998	1280	122	1310	125	70-135	2	35	mg/kg	12.23.19 14:07	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	116		118		70-135	%	12.23.19 14:07
o-Terphenyl	110		109		70-135	%	12.23.19 14:07

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

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

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

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

QC Summary 647387

LT Environmental, Inc.

RDX FEDERAL 21-23

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3111593 — Matrix: Soil — Date Prep: 12.23.19
Parent Sample Id: 647383-001 — MS Sample Id: 647383-001 S — MSD Sample Id: 647383-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	14.6	1000	1000	99	891	88	70-135	12	35	mg/kg	12.23.19 18:45	
Diesel Range Organics (DRO)	<11.5	1000	1030	103	945	95	70-135	9	35	mg/kg	12.23.19 18:45	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	123		123		70-135	%	12.23.19 18:45
o-Terphenyl	111		106		70-135	%	12.23.19 18:45

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3111614 — Matrix: Soil — Date Prep: 12.23.19
Parent Sample Id: 647387-033 — MS Sample Id: 647387-033 S — MSD Sample Id: 647387-033 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<13.8	997	878	88	966	97	70-135	10	35	mg/kg	12.23.19 23:02	
Diesel Range Organics (DRO)	22.1	997	936	92	1010	99	70-135	8	35	mg/kg	12.23.19 23:02	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	108		121		70-135	%	12.23.19 23:02
o-Terphenyl	107		113		70-135	%	12.23.19 23:02

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3111671 — Matrix: Soil — Date Prep: 12.24.19
Parent Sample Id: 647387-035 — MS Sample Id: 647387-035 S — MSD Sample Id: 647387-035 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<13.8	996	898	90	1010	101	70-135	12	35	mg/kg	12.24.19 12:36	
Diesel Range Organics (DRO)	28.6	996	973	95	1070	104	70-135	9	35	mg/kg	12.24.19 12:36	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	111		122		70-135	%	12.24.19 12:36
o-Terphenyl	110		119		70-135	%	12.24.19 12:36

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 647387

LT Environmental, Inc.

RDX FEDERAL 21-23

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3111552 — Matrix: Solid — Date Prep: 12.23.19
MB Sample Id: 7693183-1-BLK — LCS Sample Id: 7693183-1-BKS — LCSD Sample Id: 7693183-1-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	0.104	104	0.101	101	70-130	3	35	mg/kg	12.23.19 16:03	
Toluene	<0.00200	0.100	0.104	104	0.100	100	70-130	4	35	mg/kg	12.23.19 16:03	
Ethylbenzene	<0.00200	0.100	0.102	102	0.0985	99	71-129	3	35	mg/kg	12.23.19 16:03	
m,p-Xylenes	<0.00400	0.200	0.211	106	0.204	102	70-135	3	35	mg/kg	12.23.19 16:03	
o-Xylene	<0.00200	0.100	0.103	103	0.0997	100	71-133	3	35	mg/kg	12.23.19 16:03	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		101		101		70-130	%	12.23.19 16:03
4-Bromofluorobenzene	97		101		102		70-130	%	12.23.19 16:03

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3111553 — Matrix: Solid — Date Prep: 12.23.19
MB Sample Id: 7693184-1-BLK — LCS Sample Id: 7693184-1-BKS — LCSD Sample Id: 7693184-1-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	0.0909	91	0.0951	95	70-130	5	35	mg/kg	12.23.19 16:05	
Toluene	<0.00200	0.100	0.0929	93	0.0972	97	70-130	5	35	mg/kg	12.23.19 16:05	
Ethylbenzene	<0.00200	0.100	0.0920	92	0.0963	96	71-129	5	35	mg/kg	12.23.19 16:05	
m,p-Xylenes	<0.00400	0.200	0.194	97	0.203	102	70-135	5	35	mg/kg	12.23.19 16:05	
o-Xylene	<0.00200	0.100	0.0979	98	0.103	103	71-133	5	35	mg/kg	12.23.19 16:05	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		102		103		70-130	%	12.23.19 16:05
4-Bromofluorobenzene	116		116		116		70-130	%	12.23.19 16:05

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3111623 — Matrix: Solid — Date Prep: 12.24.19
MB Sample Id: 7693185-1-BLK — LCS Sample Id: 7693185-1-BKS — LCSD Sample Id: 7693185-1-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	0.100	100	0.0973	97	70-130	3	35	mg/kg	12.24.19 09:12	
Toluene	<0.00200	0.100	0.100	100	0.0967	97	70-130	3	35	mg/kg	12.24.19 09:12	
Ethylbenzene	<0.00200	0.100	0.0978	98	0.0937	94	71-129	4	35	mg/kg	12.24.19 09:12	
m,p-Xylenes	<0.00400	0.200	0.202	101	0.193	97	70-135	5	35	mg/kg	12.24.19 09:12	
o-Xylene	<0.00200	0.100	0.0998	100	0.0962	96	71-133	4	35	mg/kg	12.24.19 09:12	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		100		101		70-130	%	12.24.19 09:12
4-Bromofluorobenzene	99		101		104		70-130	%	12.24.19 09:12

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

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

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

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

QC Summary 647387

LT Environmental, Inc.

RDX FEDERAL 21-23

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3111552 — Matrix: Soil — Date Prep: 12.23.19
Parent Sample Id: 647387-001 — MS Sample Id: 647387-001 S — MSD Sample Id: 647387-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00198	0.0992	0.0971	98	0.0805	81	70-130	19	35	mg/kg	12.23.19 16:38	
Toluene	<0.00198	0.0992	0.0949	96	0.0781	79	70-130	19	35	mg/kg	12.23.19 16:38	
Ethylbenzene	<0.00198	0.0992	0.0871	88	0.0706	71	71-129	21	35	mg/kg	12.23.19 16:38	
m,p-Xylenes	<0.00397	0.198	0.178	90	0.144	73	70-135	21	35	mg/kg	12.23.19 16:38	
o-Xylene	<0.00198	0.0992	0.0879	89	0.0714	72	71-133	21	35	mg/kg	12.23.19 16:38	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		99		70-130	%	12.23.19 16:38
4-Bromofluorobenzene	100		98		70-130	%	12.23.19 16:38

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3111553 — Matrix: Soil — Date Prep: 12.23.19
Parent Sample Id: 647383-001 — MS Sample Id: 647383-001 S — MSD Sample Id: 647383-001 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	0.101	0.0922	91	0.0726	73	70-130	24	35	mg/kg	12.23.19 16:43	
Toluene	<0.00201	0.101	0.0929	92	0.0734	74	70-130	23	35	mg/kg	12.23.19 16:43	
Ethylbenzene	0.000495	0.101	0.0900	89	0.0708	71	71-129	24	35	mg/kg	12.23.19 16:43	
m,p-Xylenes	<0.00402	0.201	0.189	94	0.148	74	70-135	24	35	mg/kg	12.23.19 16:43	
o-Xylene	<0.00201	0.101	0.0957	95	0.0753	76	71-133	24	35	mg/kg	12.23.19 16:43	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		101		70-130	%	12.23.19 16:43
4-Bromofluorobenzene	121		120		70-130	%	12.23.19 16:43

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3111623 — Matrix: Soil — Date Prep: 12.24.19
Parent Sample Id: 647387-036 — MS Sample Id: 647387-036 S — MSD Sample Id: 647387-036 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	0.101	0.0891	88	0.102	102	70-130	14	35	mg/kg	12.24.19 09:47	
Toluene	<0.00201	0.101	0.0828	82	0.0975	98	70-130	16	35	mg/kg	12.24.19 09:47	
Ethylbenzene	<0.00201	0.101	0.0732	72	0.0894	89	71-129	20	35	mg/kg	12.24.19 09:47	
m,p-Xylenes	<0.00402	0.201	0.147	73	0.182	91	70-135	21	35	mg/kg	12.24.19 09:47	
o-Xylene	<0.00201	0.101	0.0746	74	0.0907	91	71-133	19	35	mg/kg	12.24.19 09:47	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		103		70-130	%	12.24.19 09:47
4-Bromofluorobenzene	103		108		70-130	%	12.24.19 09:47

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

Chain of Custody

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Atlanta, GA (770) 449-8800

Work Order No: 647367

www.xenco.com Page 1 of 4

Project Manager:	Chris McKisson	Bill to: (if different)	
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Phone:	970 285 9985	Email:	cmckisson@ltenv.com

Work Order Comments

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

Project Name:	RDX Federal 21-23	Turn Around	
Project Number:	034819068	Routine: ☐	
PO #:	2RP-5678	Rush: 3day	
Sampler's Name:	Fatima Smith	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	0.6	Thermometer ID	TNM007
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	
Sample Custody Seals:	Yes (No) N/A	Total Containers:	36

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
FS01	S	12/20/19	0931	0.5'	1	X	X	X
FS02			0941					
FS03			0945					
FS04			0948					
FS05			0951					
FS06			1016					
FS07			1025					
FS08			1029					
FS09			1032					
FS10			1035					

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

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	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			12/23/19 11:00 am	2		12/23/19 11:40
3				4		
5				6		

Revised Date101419 Rev. 2019.1

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
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199, Phoenix, AZ (480) 355-0900
Tampa, FL (813) 620-2000, Tallahassee, FL (850) 756-0747, Delray Beach, FL (561) 689-6701
Atlanta, GA (770) 449-8800

Work Order No: 647387

www.xenco.com Page 2 of 4

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

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 Federal 21-23	Turn Around	
Project Number:	034819068	Routine: ☐	
PO #:	2RP-5678	Rush: 3 day	
Sampler's Name:	Fatima Smith	Due Date:	

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
FS11	S	12/20/19	1055	0.5'	1	X	X	X
FS12			1102					
FS13			1108					
FS14			1110					
FS15			1120					
FS16			1122					
FS17			1146					
FS18			1148					
FS19			1151					
FS20			1203					

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
1	Fatima	Elliot Ky	12/23/19 11:00 AM	2	Elliot Ky		12/23/19 11:40
3				4			
5				6			

Revised Date101419 Rev. 2019.1

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
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199, Phoenix, AZ (480) 355-0900
Tampa, FL (813) 620-2000, Tallahassee, FL (850) 756-0747, Delray Beach, FL (561) 689-6701
Atlanta, GA (770) 449-8800

Work Order No: 647387

www.xenco.com Page 3 of 4

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

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 Federal 21-23	Turn Around	
Project Number:	034819 068	Routine: ☐	
PO #:	2RP-5678	Rush: 3 day	
Sampler's Name:	Fatima Smith	Due Date:	

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

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
FS21	S	12/20/19	1206	0.5'	1	X	X	X
SS16			1230	0.5'				
SS17			1239	0.5'				
SS18			1247	0.5'				
SS19			1250	0.5'				
FS22			1316	2"				
FS23			1319	0.5'				
FS24			1345	0.5'				
FS25			1347	0.5'				
FS26			1400	1'				

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

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	Relinquished by: (Signature)	Received by: (Signature)	Date/Time		Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Fatima	Elliot Tyl	12/23/19 11:00 am	2			12/23/19 11:40
3				4			
5				6			

Revised Date101419 Rev. 2019.1

Chain of Custody

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Midland, TX (432) 704-5440, EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199, Phoenix, AZ (480) 355-0900
Tampa, FL (813) 620-2000, Tallahassee, FL (850) 756-0747, Delray Beach, FL (561) 689-6701
Atlanta, GA (770) 449-8800

Work Order No: 647387

www.xenco.com Page 4 of 4

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

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 Federal 21-23	Turn Around	
Project Number:	034819068	Routine: ☐	
PO #:	2RP-5678	Rush: 3 day	
Sampler's Name:	Fatima Smith	Due Date:	

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
FS27	S	12/20/19	1402	1'	1	X	X	X
FS28			1404	0.5'				
BH01			1428	2'				
BH01A			1430	3'				
BH02			1512	2'				
BH02A			1523	3'				

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

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	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			12/23/19 11:00 am	2		12/23/19 11:40
3				4		
5				6		

Revised Date101419 Rev. 2019.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 12/23/2019 11:00:00 AM

Work Order #: 647387

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)?	.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)?	**Yes**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst: PH Device/Lot#:

Checklist completed by: Martha Castro Date: 12/23/2019

Checklist reviewed by: Jessica Kramer Date: 12/24/2019

Jessica Kramer

Analytical Report 648492

for

LT Environmental, Inc.

Project Manager: Chris McKisson

RDX Federal 21 #23

034819068

10-JAN-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)

10-JAN-20

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

Reference: XENCO Report No(s): **648492**
RDX Federal 21 #23
Project Address: Rural Eddy

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) 648492. 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. 648492 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 648492

LT Environmental, Inc., Arvada, CO

RDX Federal 21 #23

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH07	S	01-08-20 13:45	0.5 ft	648492-001
BH07A	S	01-08-20 13:50	1 ft	648492-002
BH06	S	01-08-20 14:05	2 ft	648492-003
BH06A	S	01-08-20 14:10	3 ft	648492-004
BH08	S	01-08-20 14:40	0.5 ft	648492-005
BH08A	S	01-08-20 14:45	1 ft	648492-006

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: RDX Federal 21 #23

Project ID: *034819068*
Work Order Number(s): *648492*

Report Date: *10-JAN-20*
Date Received: *01/09/2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3112829 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3112840 Chloride by EPA 300
Lab Sample ID 648492-003 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 648492-001, -002, -003, -004, -005, -006.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Certificate of Analysis Summary 648492

LT Environmental, Inc., Arvada, CO

Project Name: RDX Federal 21 #23

Project Id: 034819068
Contact: Chris McKisson
Project Location: Rural Eddy

Date Received in Lab: Thu Jan-09-20 11:07 am
Report Date: 10-JAN-20
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	648492-001		648492-002		648492-003		648492-004		648492-005		648492-006	
	Field Id:	BH07		BH07A		BH06		BH06A		BH08		BH08A	
	Depth:	0.5- ft		1- ft		2- ft		3- ft		0.5- ft		1- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-08-20 13:45		Jan-08-20 13:50		Jan-08-20 14:05		Jan-08-20 14:10		Jan-08-20 14:40		Jan-08-20 14:45	
BTEX by EPA 8021B	*Extracted:*	Jan-09-20 13:28		Jan-09-20 13:28		Jan-09-20 13:28		Jan-09-20 13:28		Jan-09-20 13:28		Jan-09-20 13:28	
	Analyzed:	Jan-10-20 02:31		Jan-10-20 02:50		Jan-10-20 03:54		Jan-10-20 04:13		Jan-10-20 04:33		Jan-10-20 04:52	
	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	<0.00202	0.00202	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201
Toluene		<0.00201	0.00201	<0.00202	0.00202	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201
Ethylbenzene		<0.00201	0.00201	<0.00202	0.00202	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201
m,p-Xylenes		<0.00402	0.00402	<0.00404	0.00404	<0.00404	0.00404	<0.00400	0.00400	<0.00401	0.00401	<0.00402	0.00402
o-Xylene		<0.00201	0.00201	<0.00202	0.00202	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201
Xylenes, Total		<0.00201	0.00201	<0.00202	0.00202	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201
Total BTEX		<0.00201	0.00201	<0.00202	0.00202	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201
Chloride by EPA 300	*Extracted:*	Jan-09-20 12:32		Jan-09-20 12:32		Jan-09-20 12:32		Jan-09-20 12:32		Jan-09-20 12:32		Jan-09-20 12:32	
	Analyzed:	Jan-09-20 15:41		Jan-09-20 15:47		Jan-09-20 15:52		Jan-09-20 16:09		Jan-09-20 16:15		Jan-09-20 16:33	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		25.1	9.96	<9.94	9.94	19.0	10.0	<9.96	9.96	29.9	9.98	51.3	9.90
TPH by SW8015 Mod	*Extracted:*	Jan-09-20 15:30		Jan-09-20 15:30		Jan-09-20 15:30		Jan-09-20 15:30		Jan-09-20 15:30		Jan-09-20 15:30	
	Analyzed:	Jan-10-20 01:14		Jan-10-20 01:34		Jan-10-20 11:45		Jan-10-20 01:54		Jan-10-20 12:04		Jan-10-20 02:14	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.2	50.2	<50.1	50.1	<50.3	50.3	<50.2	50.2	<49.9	49.9	<50.2	50.2
Diesel Range Organics (DRO)		130	50.2	<50.1	50.1	989	50.3	<50.2	50.2	429	49.9	<50.2	50.2
Motor Oil Range Hydrocarbons (MRO)		<50.2	50.2	<50.1	50.1	96.6	50.3	<50.2	50.2	51.4	49.9	<50.2	50.2
Total GRO-DRO		130	50.2	<50.1	50.1	989	50.3	<50.2	50.2	429	49.9	<50.2	50.2
Total TPH		130	50.2	<50.1	50.1	1090	50.3	<50.2	50.2	480	49.9	<50.2	50.2

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

Jessica Kramer
Project Assistant

Certificate of Analytical Results 648492

LT Environmental, Inc., Arvada, CO

RDX Federal 21 #23

Sample Id:	**BH07**	Matrix:	Soil	Date Received:	01.09.20 11.07
Lab Sample Id:	648492-001	Date Collected:	01.08.20 13.45	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.09.20 12.32	Basis:	Wet Weight
Seq Number:	3112840				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**25.1**	9.96	mg/kg	01.09.20 15.41		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.09.20 15.30	Basis:	Wet Weight
Seq Number:	3112853				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	01.10.20 01.14	U	1
Diesel Range Organics (DRO)	C10C28DRO	**130**	50.2	mg/kg	01.10.20 01.14		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	01.10.20 01.14	U	1
Total GRO-DRO	PHC628	**130**	50.2	mg/kg	01.10.20 01.14		1
Total TPH	PHC635	**130**	50.2	mg/kg	01.10.20 01.14		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	01.10.20 01.14	
o-Terphenyl	84-15-1	105	%	70-135	01.10.20 01.14	

Certificate of Analytical Results 648492

LT Environmental, Inc., Arvada, CO

RDX Federal 21 #23

Sample Id:	**BH07**	Matrix:	Soil	Date Received:	01.09.20 11.07
Lab Sample Id:	648492-001	Date Collected:	01.08.20 13.45	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.09.20 13.28	Basis:	Wet Weight
Seq Number:	3112829				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.10.20 02.31	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.10.20 02.31	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.10.20 02.31	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.10.20 02.31	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.10.20 02.31	U	1
Xylenes, Total	1330-20-7	<0.00201	0.00201	mg/kg	01.10.20 02.31	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.10.20 02.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	113	%	70-130	01.10.20 02.31	
1,4-Difluorobenzene	540-36-3	106	%	70-130	01.10.20 02.31	

Certificate of Analytical Results 648492

LT Environmental, Inc., Arvada, CO

RDX Federal 21 #23

Sample Id:	**BH07A**	Matrix:	Soil	Date Received:	01.09.20 11.07
Lab Sample Id:	648492-002	Date Collected:	01.08.20 13.50	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.09.20 12.32	Basis:	Wet Weight
Seq Number:	3112840				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.94	9.94	mg/kg	01.09.20 15.47	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.09.20 15.30	Basis:	Wet Weight
Seq Number:	3112853				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	01.10.20 01.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	01.10.20 01.34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	01.10.20 01.34	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	01.10.20 01.34	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	01.10.20 01.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	01.10.20 01.34	
o-Terphenyl	84-15-1	100	%	70-135	01.10.20 01.34	

Certificate of Analytical Results 648492

LT Environmental, Inc., Arvada, CO

RDX Federal 21 #23

Sample Id:	**BH07A**	Matrix:	Soil	Date Received:	01.09.20 11.07
Lab Sample Id:	648492-002	Date Collected:	01.08.20 13.50	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.09.20 13.28	Basis:	Wet Weight
Seq Number:	3112829				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.10.20 02.50	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.10.20 02.50	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.10.20 02.50	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	01.10.20 02.50	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.10.20 02.50	U	1
Xylenes, Total	1330-20-7	<0.00202	0.00202	mg/kg	01.10.20 02.50	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.10.20 02.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	01.10.20 02.50	
1,4-Difluorobenzene	540-36-3	101	%	70-130	01.10.20 02.50	

Certificate of Analytical Results 648492

LT Environmental, Inc., Arvada, CO

RDX Federal 21 #23

Sample Id:	**BH06**	Matrix:	Soil	Date Received:	01.09.20 11.07
Lab Sample Id:	648492-003	Date Collected:	01.08.20 14.05	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.09.20 12.32	Basis:	Wet Weight
Seq Number:	3112840				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**19.0**	10.0	mg/kg	01.09.20 15.52		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.09.20 15.30	Basis:	Wet Weight
Seq Number:	3112853				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	01.10.20 11.45	U	1
Diesel Range Organics (DRO)	C10C28DRO	**989**	50.3	mg/kg	01.10.20 11.45		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**96.6**	50.3	mg/kg	01.10.20 11.45		1
Total GRO-DRO	PHC628	**989**	50.3	mg/kg	01.10.20 11.45		1
Total TPH	PHC635	**1090**	50.3	mg/kg	01.10.20 11.45		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-135	01.10.20 11.45	
o-Terphenyl	84-15-1	113	%	70-135	01.10.20 11.45	

Certificate of Analytical Results 648492

LT Environmental, Inc., Arvada, CO

RDX Federal 21 #23

Sample Id:	**BH06**	Matrix:	Soil	Date Received:	01.09.20 11.07
Lab Sample Id:	648492-003	Date Collected:	01.08.20 14.05	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.09.20 13.28	Basis:	Wet Weight
Seq Number:	3112829				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.10.20 03.54	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.10.20 03.54	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.10.20 03.54	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	01.10.20 03.54	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.10.20 03.54	U	1
Xylenes, Total	1330-20-7	<0.00202	0.00202	mg/kg	01.10.20 03.54	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.10.20 03.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	70-130	01.10.20 03.54	
1,4-Difluorobenzene	540-36-3	99	%	70-130	01.10.20 03.54	

Certificate of Analytical Results 648492

LT Environmental, Inc., Arvada, CO

RDX Federal 21 #23

Sample Id:	**BH06A**	Matrix:	Soil	Date Received:	01.09.20 11.07
Lab Sample Id:	648492-004	Date Collected:	01.08.20 14.10	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.09.20 12.32	Basis:	Wet Weight
Seq Number:	3112840				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.96	9.96	mg/kg	01.09.20 16.09	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.09.20 15.30	Basis:	Wet Weight
Seq Number:	3112853				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	01.10.20 01.54	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	01.10.20 01.54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	01.10.20 01.54	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	01.10.20 01.54	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	01.10.20 01.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	01.10.20 01.54	
o-Terphenyl	84-15-1	99	%	70-135	01.10.20 01.54	

Certificate of Analytical Results 648492

LT Environmental, Inc., Arvada, CO

RDX Federal 21 #23

Sample Id:	**BH06A**	Matrix:	Soil	Date Received:	01.09.20 11.07
Lab Sample Id:	648492-004	Date Collected:	01.08.20 14.10	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.09.20 13.28	Basis:	Wet Weight
Seq Number:	3112829				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.10.20 04.13	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.10.20 04.13	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.10.20 04.13	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.10.20 04.13	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.10.20 04.13	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	01.10.20 04.13	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.10.20 04.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	01.10.20 04.13	
4-Bromofluorobenzene	460-00-4	124	%	70-130	01.10.20 04.13	

Certificate of Analytical Results 648492

LT Environmental, Inc., Arvada, CO

RDX Federal 21 #23

Sample Id:	**BH08**	Matrix:	Soil	Date Received:	01.09.20 11.07
Lab Sample Id:	648492-005	Date Collected:	01.08.20 14.40	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.09.20 12.32	Basis:	Wet Weight
Seq Number:	3112840				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**29.9**	9.98	mg/kg	01.09.20 16.15		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.09.20 15.30	Basis:	Wet Weight
Seq Number:	3112853				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	01.10.20 12.04	U	1
Diesel Range Organics (DRO)	C10C28DRO	**429**	49.9	mg/kg	01.10.20 12.04		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**51.4**	49.9	mg/kg	01.10.20 12.04		1
Total GRO-DRO	PHC628	**429**	49.9	mg/kg	01.10.20 12.04		1
Total TPH	PHC635	**480**	49.9	mg/kg	01.10.20 12.04		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-135	01.10.20 12.04	
o-Terphenyl	84-15-1	109	%	70-135	01.10.20 12.04	

Certificate of Analytical Results 648492

LT Environmental, Inc., Arvada, CO

RDX Federal 21 #23

Sample Id:	**BH08**	Matrix:	Soil	Date Received:	01.09.20 11.07
Lab Sample Id:	648492-005	Date Collected:	01.08.20 14.40	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.09.20 13.28	Basis:	Wet Weight
Seq Number:	3112829				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.10.20 04.33	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.10.20 04.33	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.10.20 04.33	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	01.10.20 04.33	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.10.20 04.33	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	01.10.20 04.33	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.10.20 04.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	01.10.20 04.33	
4-Bromofluorobenzene	460-00-4	114	%	70-130	01.10.20 04.33	

Certificate of Analytical Results 648492

LT Environmental, Inc., Arvada, CO

RDX Federal 21 #23

Sample Id:	**BH08A**	Matrix:	Soil	Date Received:	01.09.20 11.07
Lab Sample Id:	648492-006	Date Collected:	01.08.20 14.45	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.09.20 12.32	Basis:	Wet Weight
Seq Number:	3112840				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**51.3**	9.90	mg/kg	01.09.20 16.33		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.09.20 15.30	Basis:	Wet Weight
Seq Number:	3112853				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	01.10.20 02.14	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	01.10.20 02.14	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	01.10.20 02.14	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	01.10.20 02.14	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	01.10.20 02.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	01.10.20 02.14	
o-Terphenyl	84-15-1	101	%	70-135	01.10.20 02.14	

Certificate of Analytical Results 648492

LT Environmental, Inc., Arvada, CO

RDX Federal 21 #23

Sample Id:	**BH08A**	Matrix:	Soil	Date Received:	01.09.20 11.07
Lab Sample Id:	648492-006	Date Collected:	01.08.20 14.45	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.09.20 13.28	Basis:	Wet Weight
Seq Number:	3112829				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.10.20 04.52	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.10.20 04.52	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.10.20 04.52	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.10.20 04.52	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.10.20 04.52	U	1
Xylenes, Total	1330-20-7	<0.00201	0.00201	mg/kg	01.10.20 04.52	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.10.20 04.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	121	%	70-130	01.10.20 04.52	
1,4-Difluorobenzene	540-36-3	105	%	70-130	01.10.20 04.52	

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 648492

LT Environmental, Inc.

RDX Federal 21 #23

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3112840 — Matrix: Solid — Date Prep: 01.09.20
MB Sample Id: 7694036-1-BLK — LCS Sample Id: 7694036-1-BKS — LCSD Sample Id: 7694036-1-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	265	106	260	104	90-110	2	20	mg/kg	01.09.20 14:26	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3112840 — Matrix: Soil — Date Prep: 01.09.20
Parent Sample Id: 648485-001 — MS Sample Id: 648485-001 S — MSD Sample Id: 648485-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	16.5	201	226	104	224	103	90-110	1	20	mg/kg	01.09.20 14:42	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3112840 — Matrix: Soil — Date Prep: 01.09.20
Parent Sample Id: 648492-003 — MS Sample Id: 648492-003 S — MSD Sample Id: 648492-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	19.0	202	195	87	192	87	90-110	2	20	mg/kg	01.09.20 15:58	X

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3112853 — Matrix: Solid — Date Prep: 01.09.20
MB Sample Id: 7694039-1-BLK — LCS Sample Id: 7694039-1-BKS — LCSD Sample Id: 7694039-1-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	1300	130	1180	118	70-135	10	35	mg/kg	01.10.20 09:25	
Diesel Range Organics (DRO)	<50.0	1000	1240	124	1080	108	70-135	14	35	mg/kg	01.10.20 09:25	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	91		121		127		70-135	%	01.10.20 09:25
o-Terphenyl	91		108		100		70-135	%	01.10.20 09:25

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3112853 — Matrix: Solid — Date Prep: 01.09.20
MB Sample Id: 7694039-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	01.09.20 22:54	

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

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

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

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

QC Summary 648492

LT Environmental, Inc.

RDX Federal 21 #23

Analytical Method: TPH by SW8015 Mod | Prep Method: SW8015P
Seq Number: 3112853 | Matrix: Soil | Date Prep: 01.09.20
Parent Sample Id: 648406-011 | MS Sample Id: 648406-011 S | MSD Sample Id: 648406-011 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	1370	137	1300	129	70-135	5	35	mg/kg	01.09.20 23:35	X
Diesel Range Organics (DRO)	<50.2	1000	1130	113	1240	123	70-135	9	35	mg/kg	01.09.20 23:35	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	134		134		70-135	%	01.09.20 23:35
o-Terphenyl	128		135		70-135	%	01.09.20 23:35

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3112829 | Matrix: Solid | Date Prep: 01.09.20
MB Sample Id: 7694035-1-BLK | LCS Sample Id: 7694035-1-BKS | LCSD Sample Id: 7694035-1-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	0.106	106	0.129	129	70-130	20	35	mg/kg	01.09.20 22:22	
Toluene	<0.00200	0.100	0.105	105	0.130	130	70-130	21	35	mg/kg	01.09.20 22:22	
Ethylbenzene	<0.00200	0.100	0.107	107	0.128	128	71-129	18	35	mg/kg	01.09.20 22:22	
m,p-Xylenes	<0.00400	0.200	0.216	108	0.257	129	70-135	17	35	mg/kg	01.09.20 22:22	
o-Xylene	<0.00200	0.100	0.108	108	0.131	131	71-133	19	35	mg/kg	01.09.20 22:22	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		102		103		70-130	%	01.09.20 22:22
4-Bromofluorobenzene	102		105		112		70-130	%	01.09.20 22:22

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3112829 | Matrix: Soil | Date Prep: 01.09.20
Parent Sample Id: 648485-001 | MS Sample Id: 648485-001 S | MSD Sample Id: 648485-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.112	112	0.0964	96	70-130	15	35	mg/kg	01.09.20 23:01	
Toluene	<0.00200	0.100	0.109	109	0.0905	91	70-130	19	35	mg/kg	01.09.20 23:01	
Ethylbenzene	<0.00200	0.100	0.107	107	0.0854	85	71-129	22	35	mg/kg	01.09.20 23:01	
m,p-Xylenes	<0.00401	0.200	0.215	108	0.169	85	70-135	24	35	mg/kg	01.09.20 23:01	
o-Xylene	<0.00200	0.100	0.109	109	0.0871	87	71-133	22	35	mg/kg	01.09.20 23:01	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		105		70-130	%	01.09.20 23:01
4-Bromofluorobenzene	114		114		70-130	%	01.09.20 23:01

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

Chain of Custody

Work Order No: 648492

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 Crasibad, 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 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 & 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 Federal 21 #23	Turn Around	
Project Number:	034819068	Routine ☐	
Project Location	Rural Eddy	Rush: 3 Day	
Sampler's Name:	Anna Byers	Due Date:	
PO #:	2RP-5678	Quote #:	

SAMPLE RECEIPT			
Temperature (°C):	3.6	Temp Blank: (Yes) No	Wet Ice: (Yes) No
Received Intact:	(Yes) No	Thermometer ID	T-NM-007
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	6

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
	BH07	S	1/8/20	1345	0.5'	1	X	X	X
	BH07A	S		1350	1'	1			
	BH06	S		1405	2'	1			
	BH06A	S		1410	3'	1			
	BH08	S		1440	0.5'	1			
	BH08A	S	↓	1445	1'	1			

ANALYSIS REQUEST

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

Sample Comments

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

Circle Method(s) and Metal(s) to be analyzed

TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U

1631 / 245.1 / 7470 / 7471 : Hg

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Anna Byers	Elliot Hy	1/9/20 10:00 am	Elliot Hy		1/9/20 11:07
3						
5						

Revised Date 022619 Rev. 2019.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 01.09.2020 11.07.00 AM

Work Order #: 648492

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)?	3.6
#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: 01.09.2020

Checklist reviewed by: Jessica Kramer Date: 01.10.2020

Jessica Kramer

Analytical Report 648595

for

LT Environmental, Inc.

Project Manager: Chris McKisson

RDX Federal 21 #23

034819068

14-JAN-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-JAN-20

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

Reference: XENCO Report No(s): **648595**
RDX Federal 21 #23
Project Address: Rural Eddy

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) 648595. 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. 648595 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 648595

LT Environmental, Inc., Arvada, CO

RDX Federal 21 #23

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH05	S	01-09-20 09:50	1 ft	648595-001
BH05A	S	01-09-20 09:55	2 ft	648595-002
BH03	S	01-09-20 10:30	1.5 ft	648595-003
BH03A	S	01-09-20 10:35	2.5 ft	648595-004
BH04A	S	01-09-20 10:55	3.0 ft	648595-005
BH04B	S	01-09-20 11:10	4.0 ft	648595-006
BH09	S	01-09-20 11:40	1 ft	648595-007
BH09A	S	01-09-20 11:45	2 ft	648595-008
BH10	S	01-09-20 12:05	1 ft	648595-009
BH10A	S	01-09-20 12:10	2 ft	648595-010
BH11	S	01-09-20 12:25	1 ft	648595-011
BH11A	S	01-09-20 12:30	2 ft	648595-012
BH12	S	01-09-20 12:50	1 ft	648595-013
BH12A	S	01-09-20 12:55	2 ft	648595-014

CASE NARRATIVE

Client Name: LT Environmental, Inc.
Project Name: RDX Federal 21 #23

Project ID: *034819068*
Work Order Number(s): *648595*

Report Date: *14-JAN-20*
Date Received: *01/09/2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3112938 Chloride by EPA 300
Lab Sample ID 648595-008 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 648595-008, -009, -010, -011, -012, -013, -014.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3112974 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 648595

LT Environmental, Inc., Arvada, CO

Project Name: RDX Federal 21 #23

Project Id: 034819068
Contact: Chris McKisson
Project Location: Rural Eddy

Date Received in Lab: Thu Jan-09-20 04:40 pm
Report Date: 14-JAN-20
Project Manager: Jessica Kramer

Analysis Requested		648595-001		648595-002		648595-003		648595-004		648595-005		648595-006	
	Field Id:	BH05		BH05A		BH03		BH03A		BH04A		BH04B	
	Depth:	1- ft		2- ft		1.5- ft		2.5- ft		3.0- ft		4.0- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-09-20 09:50		Jan-09-20 09:55		Jan-09-20 10:30		Jan-09-20 10:35		Jan-09-20 10:55		Jan-09-20 11:10	
BTEX by EPA 8021B	Extracted:	Jan-10-20 12:09		Jan-10-20 12:09		Jan-10-20 12:09		Jan-10-20 12:09		Jan-10-20 12:09		Jan-10-20 12:09	
	Analyzed:	Jan-10-20 17:30		Jan-10-20 17:47		Jan-10-20 18:05		Jan-10-20 18:22		Jan-10-20 18:39		Jan-10-20 18:57	
	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	<0.00202	0.00202	<0.00202	0.00202	<0.00201	0.00201	<0.00200	0.00200	<0.00202	0.00202
Toluene		<0.00201	0.00201	<0.00202	0.00202	<0.00202	0.00202	<0.00201	0.00201	<0.00200	0.00200	<0.00202	0.00202
Ethylbenzene		<0.00201	0.00201	<0.00202	0.00202	<0.00202	0.00202	<0.00201	0.00201	<0.00200	0.00200	<0.00202	0.00202
m,p-Xylenes		<0.00402	0.00402	<0.00403	0.00403	<0.00404	0.00404	<0.00402	0.00402	<0.00401	0.00401	<0.00403	0.00403
o-Xylene		<0.00201	0.00201	<0.00202	0.00202	<0.00202	0.00202	<0.00201	0.00201	<0.00200	0.00200	<0.00202	0.00202
Xylenes, Total		<0.00201	0.00201	<0.00202	0.00202	<0.00202	0.00202	<0.00201	0.00201	<0.00200	0.00200	<0.00202	0.00202
Total BTEX		<0.00201	0.00201	<0.00202	0.00202	<0.00202	0.00202	<0.00201	0.00201	<0.00200	0.00200	<0.00202	0.00202
Chloride by EPA 300	Extracted:	Jan-10-20 10:08		Jan-10-20 10:08		Jan-10-20 10:08		Jan-10-20 10:08		Jan-10-20 10:08		Jan-10-20 10:08	
	Analyzed:	Jan-10-20 13:26		Jan-10-20 13:31		Jan-10-20 13:37		Jan-10-20 13:43		Jan-10-20 13:49		Jan-10-20 13:55	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		26.3	10.0	12.4	9.98	59.8	10.1	151	10.1	2810	49.9	400	50.0
TPH by SW8015 Mod SUB: T104704400-19-19	Extracted:	Jan-13-20 12:00		Jan-13-20 12:00		Jan-13-20 12:00		Jan-13-20 12:00		Jan-13-20 12:00		Jan-13-20 12:00	
	Analyzed:	Jan-13-20 21:21		Jan-13-20 22:17		Jan-13-20 22:36		Jan-13-20 22:55		Jan-13-20 23:14		Jan-13-20 23:33	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<49.9	49.9	<49.9	49.9	<49.9	49.9	<49.8	49.8	<50.0	50.0	<49.9	49.9
Diesel Range Organics (DRO)		<49.9	49.9	<49.9	49.9	235	49.9	<49.8	49.8	72.7	50.0	<49.9	49.9
Motor Oil Range Hydrocarbons (MRO)		<49.9	49.9	<49.9	49.9	<49.9	49.9	<49.8	49.8	<50.0	50.0	<49.9	49.9
Total GRO-DRO		<49.9	49.9	<49.9	49.9	235	49.9	<49.8	49.8	72.7	50.0	<49.9	49.9
Total TPH		<49.9	49.9	<49.9	49.9	235	49.9	<49.8	49.8	72.7	50.0	<49.9	49.9

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 648595

LT Environmental, Inc., Arvada, CO

Project Name: RDX Federal 21 #23

Project Id: 034819068
Contact: Chris McKisson
Project Location: Rural Eddy

Date Received in Lab: Thu Jan-09-20 04:40 pm
Report Date: 14-JAN-20
Project Manager: Jessica Kramer

Analysis Requested		648595-007		648595-008		648595-009		648595-010		648595-011		648595-012	
	Field Id:	BH09		BH09A		BH10		BH10A		BH11		BH11A	
	Depth:	1- ft		2- ft		1- ft		2- ft		1- ft		2- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-09-20 11:40		Jan-09-20 11:45		Jan-09-20 12:05		Jan-09-20 12:10		Jan-09-20 12:25		Jan-09-20 12:30	
BTEX by EPA 8021B	*Extracted:*	Jan-10-20 12:09		Jan-10-20 12:09		Jan-10-20 12:09		Jan-10-20 12:09		Jan-10-20 12:09		Jan-10-20 12:09	
	Analyzed:	Jan-10-20 19:14		Jan-10-20 19:31		Jan-10-20 19:49		Jan-10-20 17:12		Jan-10-20 20:58		Jan-10-20 21:15	
	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	<0.00202	0.00202	<0.00202	0.00202	<0.00202	0.00202	<0.00201	0.00201
Toluene		<0.00201	0.00201	<0.00200	0.00200	<0.00202	0.00202	<0.00202	0.00202	<0.00202	0.00202	<0.00201	0.00201
Ethylbenzene		<0.00201	0.00201	<0.00200	0.00200	<0.00202	0.00202	<0.00202	0.00202	<0.00202	0.00202	<0.00201	0.00201
m,p-Xylenes		<0.00402	0.00402	<0.00401	0.00401	<0.00404	0.00404	<0.00403	0.00403	<0.00403	0.00403	<0.00402	0.00402
o-Xylene		<0.00201	0.00201	<0.00200	0.00200	<0.00202	0.00202	<0.00202	0.00202	<0.00202	0.00202	<0.00201	0.00201
Xylenes, Total		<0.00201	0.00201	<0.00200	0.00200	<0.00202	0.00202	<0.00202	0.00202	<0.00202	0.00202	<0.00201	0.00201
Total BTEX		<0.00201	0.00201	<0.00200	0.00200	<0.00202	0.00202	<0.00202	0.00202	<0.00202	0.00202	<0.00201	0.00201
Chloride by EPA 300	*Extracted:*	Jan-10-20 10:08		Jan-10-20 11:16		Jan-10-20 11:16		Jan-10-20 11:16		Jan-10-20 11:16		Jan-10-20 11:16	
	Analyzed:	Jan-10-20 14:01		Jan-10-20 14:36		Jan-10-20 14:53		Jan-10-20 14:59		Jan-10-20 15:05		Jan-10-20 15:11	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		59.1	10.1	238	9.94	<10.0	10.0	<10.0	10.0	<10.0	10.0	<9.96	9.96
TPH by SW8015 Mod SUB: T104704400-19-19	*Extracted:*	Jan-13-20 12:00		Jan-13-20 12:00		Jan-13-20 12:00		Jan-13-20 12:00		Jan-13-20 12:00		Jan-13-20 12:00	
	Analyzed:	Jan-13-20 23:51		Jan-14-20 00:10		Jan-14-20 00:29		Jan-14-20 00:47		Jan-14-20 01:25		Jan-14-20 01:44	
	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	<49.8	49.8	<50.0	50.0	<49.9	49.9
Diesel Range Organics (DRO)		<50.0	50.0	<49.9	49.9	<50.0	50.0	<49.8	49.8	<50.0	50.0	<49.9	49.9
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<49.9	49.9	<50.0	50.0	<49.8	49.8	<50.0	50.0	<49.9	49.9
Total GRO-DRO		<50.0	50.0	<49.9	49.9	<50.0	50.0	<49.8	49.8	<50.0	50.0	<49.9	49.9
Total TPH		<50.0	50.0	<49.9	49.9	<50.0	50.0	<49.8	49.8	<50.0	50.0	<49.9	49.9

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

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 648595

LT Environmental, Inc., Arvada, CO

Project Name: RDX Federal 21 #23

Project Id: 034819068
Contact: Chris McKisson
Project Location: Rural Eddy

Date Received in Lab: Thu Jan-09-20 04:40 pm
Report Date: 14-JAN-20
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	648595-013		648595-014					
	Field Id:	BH12		BH12A					
	Depth:	1- ft		2- ft					
	Matrix:	SOIL		SOIL					
	Sampled:	Jan-09-20 12:50		Jan-09-20 12:55					
BTEX by EPA 8021B	***Extracted:***	Jan-10-20 12:09		Jan-10-20 12:09					
	Analyzed:	Jan-10-20 21:33		Jan-10-20 21:50					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.00201	0.00201	<0.00199	0.00199				
Toluene		<0.00201	0.00201	<0.00199	0.00199				
Ethylbenzene		<0.00201	0.00201	<0.00199	0.00199				
m,p-Xylenes		<0.00402	0.00402	<0.00398	0.00398				
o-Xylene		<0.00201	0.00201	<0.00199	0.00199				
Xylenes, Total		<0.00201	0.00201	<0.00199	0.00199				
Total BTEX		<0.00201	0.00201	<0.00199	0.00199				
Chloride by EPA 300	***Extracted:***	Jan-10-20 11:16		Jan-10-20 11:16					
	Analyzed:	Jan-10-20 15:28		Jan-10-20 15:34					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		<9.98	9.98	<9.96	9.96				
TPH by SW8015 Mod SUB: T104704400-19-19	***Extracted:***	Jan-13-20 12:00		Jan-13-20 12:00					
	Analyzed:	Jan-14-20 02:03		Jan-14-20 02:22					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<49.9	49.9	<49.8	49.8				
Diesel Range Organics (DRO)		<49.9	49.9	<49.8	49.8				
Motor Oil Range Hydrocarbons (MRO)		<49.9	49.9	<49.8	49.8				
Total GRO-DRO		<49.9	49.9	<49.8	49.8				
Total TPH		<49.9	49.9	<49.8	49.8				

Jessica Kramer
Project Assistant

Certificate of Analytical Results 648595

LT Environmental, Inc., Arvada, CO

RDX Federal 21 #23

Sample Id:	**BH05**	Matrix:	Soil	Date Received:	01.09.20 16.40
Lab Sample Id:	648595-001	Date Collected:	01.09.20 09.50	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.10.20 10.08	Basis:	Wet Weight
Seq Number:	3112937				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**26.3**	10.0	mg/kg	01.10.20 13.26		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	01.13.20 12.00	Basis:	Wet Weight
Seq Number:	3113132			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	01.13.20 21.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	01.13.20 21.21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	01.13.20 21.21	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	01.13.20 21.21	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	01.13.20 21.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	01.13.20 21.21	
o-Terphenyl	84-15-1	94	%	70-135	01.13.20 21.21	

Certificate of Analytical Results 648595

LT Environmental, Inc., Arvada, CO

RDX Federal 21 #23

Sample Id:	**BH05**	Matrix:	Soil	Date Received:	01.09.20 16.40
Lab Sample Id:	648595-001	Date Collected:	01.09.20 09.50	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.10.20 12.09	Basis:	Wet Weight
Seq Number:	3112974				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.10.20 17.30	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.10.20 17.30	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.10.20 17.30	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.10.20 17.30	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.10.20 17.30	U	1
Xylenes, Total	1330-20-7	<0.00201	0.00201	mg/kg	01.10.20 17.30	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.10.20 17.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	01.10.20 17.30	
4-Bromofluorobenzene	460-00-4	100	%	70-130	01.10.20 17.30	

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LT Environmental, Inc., Arvada, CO

RDX Federal 21 #23

Sample Id:	**BH05A**	Matrix:	Soil	Date Received:	01.09.20 16.40
Lab Sample Id:	648595-002	Date Collected:	01.09.20 09.55	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.10.20 10.08	Basis:	Wet Weight
Seq Number:	3112937				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**12.4**	9.98	mg/kg	01.10.20 13.31		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	01.13.20 12.00	Basis:	Wet Weight
Seq Number:	3113132			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	01.13.20 22.17	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	01.13.20 22.17	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	01.13.20 22.17	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	01.13.20 22.17	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	01.13.20 22.17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	01.13.20 22.17	
o-Terphenyl	84-15-1	91	%	70-135	01.13.20 22.17	

Certificate of Analytical Results 648595

LT Environmental, Inc., Arvada, CO

RDX Federal 21 #23

Sample Id:	**BH05A**	Matrix:	Soil	Date Received:	01.09.20 16.40
Lab Sample Id:	648595-002	Date Collected:	01.09.20 09.55	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.10.20 12.09	Basis:	Wet Weight
Seq Number:	3112974				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.10.20 17.47	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.10.20 17.47	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.10.20 17.47	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	01.10.20 17.47	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.10.20 17.47	U	1
Xylenes, Total	1330-20-7	<0.00202	0.00202	mg/kg	01.10.20 17.47	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.10.20 17.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	01.10.20 17.47	
4-Bromofluorobenzene	460-00-4	106	%	70-130	01.10.20 17.47	

Certificate of Analytical Results 648595

LT Environmental, Inc., Arvada, CO

RDX Federal 21 #23

Sample Id:	**BH03**	Matrix:	Soil	Date Received:	01.09.20 16.40
Lab Sample Id:	648595-003	Date Collected:	01.09.20 10.30	Sample Depth:	1.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.10.20 10.08	Basis:	Wet Weight
Seq Number:	3112937				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**59.8**	10.1	mg/kg	01.10.20 13.37		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	01.13.20 12.00	Basis:	Wet Weight
Seq Number:	3113132			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	01.13.20 22.36	U	1
Diesel Range Organics (DRO)	C10C28DRO	**235**	49.9	mg/kg	01.13.20 22.36		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	01.13.20 22.36	U	1
Total GRO-DRO	PHC628	**235**	49.9	mg/kg	01.13.20 22.36		1
Total TPH	PHC635	**235**	49.9	mg/kg	01.13.20 22.36		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	01.13.20 22.36	
o-Terphenyl	84-15-1	97	%	70-135	01.13.20 22.36	

Certificate of Analytical Results 648595

LT Environmental, Inc., Arvada, CO

RDX Federal 21 #23

Sample Id:	**BH03**	Matrix:	Soil	Date Received:	01.09.20 16.40
Lab Sample Id:	648595-003	Date Collected:	01.09.20 10.30	Sample Depth:	1.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.10.20 12.09	Basis:	Wet Weight
Seq Number:	3112974				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.10.20 18.05	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.10.20 18.05	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.10.20 18.05	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	01.10.20 18.05	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.10.20 18.05	U	1
Xylenes, Total	1330-20-7	<0.00202	0.00202	mg/kg	01.10.20 18.05	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.10.20 18.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	70-130	01.10.20 18.05	
1,4-Difluorobenzene	540-36-3	102	%	70-130	01.10.20 18.05	

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LT Environmental, Inc., Arvada, CO

RDX Federal 21 #23

Sample Id:	**BH03A**	Matrix:	Soil	Date Received:	01.09.20 16.40
Lab Sample Id:	648595-004	Date Collected:	01.09.20 10.35	Sample Depth:	2.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.10.20 10.08	Basis:	Wet Weight
Seq Number:	3112937				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**151**	10.1	mg/kg	01.10.20 13.43		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	01.13.20 12.00	Basis:	Wet Weight
Seq Number:	3113132			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	01.13.20 22.55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	01.13.20 22.55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	01.13.20 22.55	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	01.13.20 22.55	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	01.13.20 22.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	01.13.20 22.55	
o-Terphenyl	84-15-1	90	%	70-135	01.13.20 22.55	

Certificate of Analytical Results 648595

LT Environmental, Inc., Arvada, CO

RDX Federal 21 #23

Sample Id:	**BH03A**	Matrix:	Soil	Date Received:	01.09.20 16.40
Lab Sample Id:	648595-004	Date Collected:	01.09.20 10.35	Sample Depth:	2.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.10.20 12.09	Basis:	Wet Weight
Seq Number:	3112974				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.10.20 18.22	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.10.20 18.22	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.10.20 18.22	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.10.20 18.22	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.10.20 18.22	U	1
Xylenes, Total	1330-20-7	<0.00201	0.00201	mg/kg	01.10.20 18.22	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.10.20 18.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	01.10.20 18.22	
4-Bromofluorobenzene	460-00-4	111	%	70-130	01.10.20 18.22	

Certificate of Analytical Results 648595

LT Environmental, Inc., Arvada, CO

RDX Federal 21 #23

Sample Id:	**BH04A**	Matrix:	Soil	Date Received:	01.09.20 16.40
Lab Sample Id:	648595-005	Date Collected:	01.09.20 10.55	Sample Depth:	3.0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.10.20 10.08	Basis:	Wet Weight
Seq Number:	3112937				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2810**	49.9	mg/kg	01.10.20 13.49		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	01.13.20 12.00	Basis:	Wet Weight
Seq Number:	3113132			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	01.13.20 23.14	U	1
Diesel Range Organics (DRO)	C10C28DRO	**72.7**	50.0	mg/kg	01.13.20 23.14		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.13.20 23.14	U	1
Total GRO-DRO	PHC628	**72.7**	50.0	mg/kg	01.13.20 23.14		1
Total TPH	PHC635	**72.7**	50.0	mg/kg	01.13.20 23.14		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	01.13.20 23.14	
o-Terphenyl	84-15-1	92	%	70-135	01.13.20 23.14	

Certificate of Analytical Results 648595

LT Environmental, Inc., Arvada, CO

RDX Federal 21 #23

Sample Id:	**BH04A**	Matrix:	Soil	Date Received:	01.09.20 16.40
Lab Sample Id:	648595-005	Date Collected:	01.09.20 10.55	Sample Depth:	3.0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.10.20 12.09	Basis:	Wet Weight
Seq Number:	3112974				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.10.20 18.39	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.10.20 18.39	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.10.20 18.39	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	01.10.20 18.39	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.10.20 18.39	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	01.10.20 18.39	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.10.20 18.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	01.10.20 18.39	
4-Bromofluorobenzene	460-00-4	107	%	70-130	01.10.20 18.39	

Certificate of Analytical Results 648595

LT Environmental, Inc., Arvada, CO

RDX Federal 21 #23

Sample Id:	**BH04B**	Matrix:	Soil	Date Received:	01.09.20 16.40
Lab Sample Id:	648595-006	Date Collected:	01.09.20 11.10	Sample Depth:	4.0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.10.20 10.08	Basis:	Wet Weight
Seq Number:	3112937				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**400**	50.0	mg/kg	01.10.20 13.55		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	01.13.20 12.00	Basis:	Wet Weight
Seq Number:	3113132			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	01.13.20 23.33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	01.13.20 23.33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	01.13.20 23.33	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	01.13.20 23.33	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	01.13.20 23.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	01.13.20 23.33	
o-Terphenyl	84-15-1	97	%	70-135	01.13.20 23.33	

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LT Environmental, Inc., Arvada, CO

RDX Federal 21 #23

Sample Id:	**BH04B**	Matrix:	Soil	Date Received:	01.09.20 16.40
Lab Sample Id:	648595-006	Date Collected:	01.09.20 11.10	Sample Depth:	4.0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.10.20 12.09	Basis:	Wet Weight
Seq Number:	3112974				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.10.20 18.57	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.10.20 18.57	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.10.20 18.57	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	01.10.20 18.57	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.10.20 18.57	U	1
Xylenes, Total	1330-20-7	<0.00202	0.00202	mg/kg	01.10.20 18.57	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.10.20 18.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	01.10.20 18.57	
4-Bromofluorobenzene	460-00-4	101	%	70-130	01.10.20 18.57	

Certificate of Analytical Results 648595

LT Environmental, Inc., Arvada, CO

RDX Federal 21 #23

Sample Id:	**BH09**	Matrix:	Soil	Date Received:	01.09.20 16.40
Lab Sample Id:	648595-007	Date Collected:	01.09.20 11.40	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.10.20 10.08	Basis:	Wet Weight
Seq Number:	3112937				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**59.1**	10.1	mg/kg	01.10.20 14.01		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	01.13.20 12.00	Basis:	Wet Weight
Seq Number:	3113132			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	01.13.20 23.51	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	01.13.20 23.51	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.13.20 23.51	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	01.13.20 23.51	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	01.13.20 23.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	01.13.20 23.51	
o-Terphenyl	84-15-1	98	%	70-135	01.13.20 23.51	

Certificate of Analytical Results 648595

LT Environmental, Inc., Arvada, CO

RDX Federal 21 #23

Sample Id:	**BH09**	Matrix:	Soil	Date Received:	01.09.20 16.40
Lab Sample Id:	648595-007	Date Collected:	01.09.20 11.40	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.10.20 12.09	Basis:	Wet Weight
Seq Number:	3112974				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.10.20 19.14	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.10.20 19.14	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.10.20 19.14	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.10.20 19.14	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.10.20 19.14	U	1
Xylenes, Total	1330-20-7	<0.00201	0.00201	mg/kg	01.10.20 19.14	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.10.20 19.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	109	%	70-130	01.10.20 19.14	
1,4-Difluorobenzene	540-36-3	102	%	70-130	01.10.20 19.14	

Certificate of Analytical Results 648595

LT Environmental, Inc., Arvada, CO

RDX Federal 21 #23

Sample Id:	**BH09A**	Matrix:	Soil	Date Received:	01.09.20 16.40
Lab Sample Id:	648595-008	Date Collected:	01.09.20 11.45	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.10.20 11.16	Basis:	Wet Weight
Seq Number:	3112938				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**238**	9.94	mg/kg	01.10.20 14.36		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	01.13.20 12.00	Basis:	Wet Weight
Seq Number:	3113132			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	01.14.20 00.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	01.14.20 00.10	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	01.14.20 00.10	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	01.14.20 00.10	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	01.14.20 00.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	01.14.20 00.10	
o-Terphenyl	84-15-1	88	%	70-135	01.14.20 00.10	

Certificate of Analytical Results 648595

LT Environmental, Inc., Arvada, CO

RDX Federal 21 #23

Sample Id:	**BH09A**	Matrix:	Soil	Date Received:	01.09.20 16.40
Lab Sample Id:	648595-008	Date Collected:	01.09.20 11.45	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.10.20 12.09	Basis:	Wet Weight
Seq Number:	3112974				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.10.20 19.31	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.10.20 19.31	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.10.20 19.31	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	01.10.20 19.31	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.10.20 19.31	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	01.10.20 19.31	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.10.20 19.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	70-130	01.10.20 19.31	
1,4-Difluorobenzene	540-36-3	98	%	70-130	01.10.20 19.31	

Certificate of Analytical Results 648595

LT Environmental, Inc., Arvada, CO

RDX Federal 21 #23

Sample Id:	**BH10**	Matrix:	Soil	Date Received:	01.09.20 16.40
Lab Sample Id:	648595-009	Date Collected:	01.09.20 12.05	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.10.20 11.16	Basis:	Wet Weight
Seq Number:	3112938				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<10.0	10.0	mg/kg	01.10.20 14.53	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	01.13.20 12.00	Basis:	Wet Weight
Seq Number:	3113132			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	01.14.20 00.29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	01.14.20 00.29	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.14.20 00.29	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	01.14.20 00.29	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	01.14.20 00.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	01.14.20 00.29	
o-Terphenyl	84-15-1	89	%	70-135	01.14.20 00.29	

Certificate of Analytical Results 648595

LT Environmental, Inc., Arvada, CO

RDX Federal 21 #23

Sample Id:	**BH10**	Matrix:	Soil	Date Received:	01.09.20 16.40
Lab Sample Id:	648595-009	Date Collected:	01.09.20 12.05	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.10.20 12.09	Basis:	Wet Weight
Seq Number:	3112974				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.10.20 19.49	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.10.20 19.49	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.10.20 19.49	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	01.10.20 19.49	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.10.20 19.49	U	1
Xylenes, Total	1330-20-7	<0.00202	0.00202	mg/kg	01.10.20 19.49	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.10.20 19.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	01.10.20 19.49	
4-Bromofluorobenzene	460-00-4	105	%	70-130	01.10.20 19.49	

Certificate of Analytical Results 648595

LT Environmental, Inc., Arvada, CO

RDX Federal 21 #23

Sample Id:	**BH10A**	Matrix:	Soil	Date Received:	01.09.20 16.40
Lab Sample Id:	648595-010	Date Collected:	01.09.20 12.10	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.10.20 11.16	Basis:	Wet Weight
Seq Number:	3112938				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<10.0	10.0	mg/kg	01.10.20 14.59	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	01.13.20 12.00	Basis:	Wet Weight
Seq Number:	3113132			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	01.14.20 00.47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	01.14.20 00.47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	01.14.20 00.47	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	01.14.20 00.47	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	01.14.20 00.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	01.14.20 00.47	
o-Terphenyl	84-15-1	93	%	70-135	01.14.20 00.47	

Certificate of Analytical Results 648595

LT Environmental, Inc., Arvada, CO

RDX Federal 21 #23

Sample Id:	**BH10A**	Matrix:	Soil	Date Received:	01.09.20 16.40
Lab Sample Id:	648595-010	Date Collected:	01.09.20 12.10	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.10.20 12.09	Basis:	Wet Weight
Seq Number:	3112974				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.10.20 17.12	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.10.20 17.12	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.10.20 17.12	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	01.10.20 17.12	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.10.20 17.12	U	1
Xylenes, Total	1330-20-7	<0.00202	0.00202	mg/kg	01.10.20 17.12	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.10.20 17.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	01.10.20 17.12	
4-Bromofluorobenzene	460-00-4	98	%	70-130	01.10.20 17.12	

Certificate of Analytical Results 648595

LT Environmental, Inc., Arvada, CO

RDX Federal 21 #23

Sample Id:	**BH11**	Matrix:	Soil	Date Received:	01.09.20 16.40
Lab Sample Id:	648595-011	Date Collected:	01.09.20 12.25	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.10.20 11.16	Basis:	Wet Weight
Seq Number:	3112938				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<10.0	10.0	mg/kg	01.10.20 15.05	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	01.13.20 12.00	Basis:	Wet Weight
Seq Number:	3113132			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	01.14.20 01.25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	01.14.20 01.25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.14.20 01.25	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	01.14.20 01.25	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	01.14.20 01.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	01.14.20 01.25	
o-Terphenyl	84-15-1	93	%	70-135	01.14.20 01.25	

Certificate of Analytical Results 648595

LT Environmental, Inc., Arvada, CO

RDX Federal 21 #23

Sample Id:	**BH11**	Matrix:	Soil	Date Received:	01.09.20 16.40
Lab Sample Id:	648595-011	Date Collected:	01.09.20 12.25	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.10.20 12.09	Basis:	Wet Weight
Seq Number:	3112974				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.10.20 20.58	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.10.20 20.58	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.10.20 20.58	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	01.10.20 20.58	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.10.20 20.58	U	1
Xylenes, Total	1330-20-7	<0.00202	0.00202	mg/kg	01.10.20 20.58	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.10.20 20.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	70-130	01.10.20 20.58	
1,4-Difluorobenzene	540-36-3	101	%	70-130	01.10.20 20.58	

Certificate of Analytical Results 648595

LT Environmental, Inc., Arvada, CO

RDX Federal 21 #23

Sample Id:	**BH11A**	Matrix:	Soil	Date Received:	01.09.20 16.40
Lab Sample Id:	648595-012	Date Collected:	01.09.20 12.30	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.10.20 11.16	Basis:	Wet Weight
Seq Number:	3112938				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.96	9.96	mg/kg	01.10.20 15.11	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	01.13.20 12.00	Basis:	Wet Weight
Seq Number:	3113132			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	01.14.20 01.44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	01.14.20 01.44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	01.14.20 01.44	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	01.14.20 01.44	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	01.14.20 01.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	01.14.20 01.44	
o-Terphenyl	84-15-1	88	%	70-135	01.14.20 01.44	

Certificate of Analytical Results 648595

LT Environmental, Inc., Arvada, CO

RDX Federal 21 #23

Sample Id:	**BH11A**	Matrix:	Soil	Date Received:	01.09.20 16.40
Lab Sample Id:	648595-012	Date Collected:	01.09.20 12.30	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.10.20 12.09	Basis:	Wet Weight
Seq Number:	3112974				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.10.20 21.15	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.10.20 21.15	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.10.20 21.15	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.10.20 21.15	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.10.20 21.15	U	1
Xylenes, Total	1330-20-7	<0.00201	0.00201	mg/kg	01.10.20 21.15	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.10.20 21.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	01.10.20 21.15	
1,4-Difluorobenzene	540-36-3	102	%	70-130	01.10.20 21.15	

Certificate of Analytical Results 648595

LT Environmental, Inc., Arvada, CO

RDX Federal 21 #23

Sample Id:	**BH12**	Matrix:	Soil	Date Received:	01.09.20 16.40
Lab Sample Id:	648595-013	Date Collected:	01.09.20 12.50	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.10.20 11.16	Basis:	Wet Weight
Seq Number:	3112938				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.98	9.98	mg/kg	01.10.20 15.28	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	01.13.20 12.00	Basis:	Wet Weight
Seq Number:	3113132			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	01.14.20 02.03	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	01.14.20 02.03	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	01.14.20 02.03	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	01.14.20 02.03	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	01.14.20 02.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	01.14.20 02.03	
o-Terphenyl	84-15-1	90	%	70-135	01.14.20 02.03	

Certificate of Analytical Results 648595

LT Environmental, Inc., Arvada, CO

RDX Federal 21 #23

Sample Id:	**BH12**	Matrix:	Soil	Date Received:	01.09.20 16.40
Lab Sample Id:	648595-013	Date Collected:	01.09.20 12.50	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.10.20 12.09	Basis:	Wet Weight
Seq Number:	3112974				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.10.20 21.33	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.10.20 21.33	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.10.20 21.33	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.10.20 21.33	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.10.20 21.33	U	1
Xylenes, Total	1330-20-7	<0.00201	0.00201	mg/kg	01.10.20 21.33	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.10.20 21.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	98	%	70-130	01.10.20 21.33	
4-Bromofluorobenzene	460-00-4	98	%	70-130	01.10.20 21.33	

Certificate of Analytical Results 648595

LT Environmental, Inc., Arvada, CO

RDX Federal 21 #23

Sample Id:	**BH12A**	Matrix:	Soil	Date Received:	01.09.20 16.40
Lab Sample Id:	648595-014	Date Collected:	01.09.20 12.55	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.10.20 11.16	Basis:	Wet Weight
Seq Number:	3112938				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.96	9.96	mg/kg	01.10.20 15.34	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	01.13.20 12.00	Basis:	Wet Weight
Seq Number:	3113132			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	01.14.20 02.22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	01.14.20 02.22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	01.14.20 02.22	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	01.14.20 02.22	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	01.14.20 02.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	01.14.20 02.22	
o-Terphenyl	84-15-1	90	%	70-135	01.14.20 02.22	

Certificate of Analytical Results 648595

LT Environmental, Inc., Arvada, CO

RDX Federal 21 #23

Sample Id:	**BH12A**	Matrix:	Soil	Date Received:	01.09.20 16.40
Lab Sample Id:	648595-014	Date Collected:	01.09.20 12.55	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.10.20 12.09	Basis:	Wet Weight
Seq Number:	3112974				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.10.20 21.50	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.10.20 21.50	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.10.20 21.50	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.10.20 21.50	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.10.20 21.50	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	01.10.20 21.50	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.10.20 21.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	01.10.20 21.50	
4-Bromofluorobenzene	460-00-4	99	%	70-130	01.10.20 21.50	

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 648595

LT Environmental, Inc.

RDX Federal 21 #23

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3112937 — Matrix: Solid — Date Prep: 01.10.20
MB Sample Id: 7694094-1-BLK — LCS Sample Id: 7694094-1-BKS — LCSD Sample Id: 7694094-1-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	258	103	260	104	90-110	1	20	mg/kg	01.10.20 11:17	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3112938 — Matrix: Solid — Date Prep: 01.10.20
MB Sample Id: 7694098-1-BLK — LCS Sample Id: 7694098-1-BKS — LCSD Sample Id: 7694098-1-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	258	103	257	103	90-110	0	20	mg/kg	01.10.20 14:24	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3112937 — Matrix: Soil — Date Prep: 01.10.20
Parent Sample Id: 648593-021 — MS Sample Id: 648593-021 S — MSD Sample Id: 648593-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	4.64	201	208	101	208	102	90-110	0	20	mg/kg	01.10.20 11:33	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3112937 — Matrix: Soil — Date Prep: 01.10.20
Parent Sample Id: 648593-031 — MS Sample Id: 648593-031 S — MSD Sample Id: 648593-031 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	4.25	199	207	102	207	101	90-110	0	20	mg/kg	01.10.20 12:51	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3112938 — Matrix: Soil — Date Prep: 01.10.20
Parent Sample Id: 648567-003 — MS Sample Id: 648567-003 S — MSD Sample Id: 648567-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	95.7	200	247	76	250	77	90-110	1	20	mg/kg	01.10.20 16:04	X

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

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

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

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

QC Summary 648595

LT Environmental, Inc.

RDX Federal 21 #23

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3112938 Matrix: Soil Date Prep: 01.10.20
Parent Sample Id: 648595-008 MS Sample Id: 648595-008 S MSD Sample Id: 648595-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	238	200	457	110	461	112	90-110	1	20	mg/kg	01.10.20 14:41	X

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3113132 Matrix: Solid Date Prep: 01.13.20
MB Sample Id: 7694235-1-BLK LCS Sample Id: 7694235-1-BKS LCSD Sample Id: 7694235-1-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	816	82	813	81	70-135	0	20	mg/kg	01.13.20 20:44	
Diesel Range Organics (DRO)	<15.0	1000	837	84	804	80	70-135	4	20	mg/kg	01.13.20 20:44	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	88		114		115		70-135	%	01.13.20 20:44
o-Terphenyl	92		101		96		70-135	%	01.13.20 20:44

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3113132 Matrix: Solid Date Prep: 01.13.20
MB Sample Id: 7694235-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	01.13.20 20:25	

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3113132 Matrix: Soil Date Prep: 01.13.20
Parent Sample Id: 648595-001 MS Sample Id: 648595-001 S MSD Sample Id: 648595-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	999	826	83	816	82	70-135	1	20	mg/kg	01.13.20 21:40	
Diesel Range Organics (DRO)	<15.0	999	813	81	806	81	70-135	1	20	mg/kg	01.13.20 21:40	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	115		114		70-135	%	01.13.20 21:40
o-Terphenyl	102		100		70-135	%	01.13.20 21:40

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 648595

LT Environmental, Inc.

RDX Federal 21 #23

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B

Seq Number: 3112974 Matrix: Solid Date Prep: 01.10.20

MB Sample Id: 7694120-1-BLK LCS Sample Id: 7694120-1-BKS LCSD Sample Id: 7694120-1-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	0.0969	97	0.110	110	70-130	13	35	mg/kg	01.10.20 14:48	
Toluene	<0.00200	0.100	0.0973	97	0.109	109	70-130	11	35	mg/kg	01.10.20 14:48	
Ethylbenzene	<0.00200	0.100	0.0957	96	0.108	108	71-129	12	35	mg/kg	01.10.20 14:48	
m,p-Xylenes	<0.00400	0.200	0.197	99	0.222	111	70-135	12	35	mg/kg	01.10.20 14:48	
o-Xylene	<0.00200	0.100	0.0961	96	0.108	108	71-133	12	35	mg/kg	01.10.20 14:48	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		98		102		70-130	%	01.10.20 14:48
4-Bromofluorobenzene	97		96		103		70-130	%	01.10.20 14:48

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B

Seq Number: 3112974 Matrix: Soil Date Prep: 01.10.20

Parent Sample Id: 648595-010 MS Sample Id: 648595-010 S MSD Sample Id: 648595-010 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	0.107	106	0.120	119	70-130	11	35	mg/kg	01.10.20 15:40	
Toluene	<0.00202	0.101	0.105	104	0.117	116	70-130	11	35	mg/kg	01.10.20 15:40	
Ethylbenzene	<0.00202	0.101	0.101	100	0.113	112	71-129	11	35	mg/kg	01.10.20 15:40	
m,p-Xylenes	<0.00403	0.202	0.207	102	0.232	115	70-135	11	35	mg/kg	01.10.20 15:40	
o-Xylene	<0.00202	0.101	0.102	101	0.114	113	71-133	11	35	mg/kg	01.10.20 15:40	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		103		70-130	%	01.10.20 15:40
4-Bromofluorobenzene	100		105		70-130	%	01.10.20 15:40

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

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: 648595

Page 1 of 2

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 Federal 21 #23	Turn Around	
Project Number:	034819068	Routine ☐	
Project Location	Rural Eddy	Rush: 3DAY	
Sampler's Name:	~~Anna Byers~~ Jeremy Hill	Due Date: 1/14/20	
PO #:	2RP-5678	Quote #:	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	2.2	Thermometer ID	TNM002
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	14

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
	BH05	S	1/9/20	0950	1'	1	X	X	X	discrete
	BH05A			0955	2'	1	X	X	X	
	BH03			1030	1.5'	1	X	X	X	
	BH03A			1035	2.5'	1	X	X	X	
	BH04A			1055	3.0'	1	X	X	X	
	BH04B			1110	4.0'	1	X	X	X	
	BH09			1140	1'	1	X	X	X	
	BH09A			1145	2'	1	X	X	X	
	BH10			1205	1'	1	X	X	X	
	BH10A			1210	2'	1	X	X	X	

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

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

Circle Method(s) and Metal(s) to be analyzed

TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U

1631 / 245.1 / 7470 / 7471 : Hg

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		1/9/20 16:40	2		
			4		
			6		

Revised Date 022619 Rev. 2019.1

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: 448595

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:	970-285-9485	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 Federal 21 #23	Turn Around	
Project Number:	034 819 068	Routine ☐	
Project Location	Rural Eddy	Rush: 3 day	
Sampler's Name:	Jeremy Hill	Due Date: 1/14/20	
PO #:	2RP-5678	Quote #:	

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

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
	~~BH10~~ BH11	S	1/9/20	1225	1'	1		X	X	X	discrete
	BH11A			1230	2'	1		X	X	X	
	BH12			1250	1'	1		X	X	X	
	BH12A			1255	2'	1		X	X	X	

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

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

Circle Method(s) and Metal(s) to be analyzed

TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U

1631 / 245.1 / 7470 / 7471 : Hg

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		1/9/20 16:40	2		
			4		
			6		

Revised Date 022619 Rev. 2019.1

Inter-Office Shipment

IOS Number **55824**

Date/Time: 01/10/20 12:18
Lab# From: **Carlsbad**
Lab# To: **Midland**

Created by: Elizabeth Mcclellan
Delivery Priority:
Air Bill No.: 777451781071

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
648595-001	S	BH05	01/09/20 09:50	SW8015MOD_NM	TPH by SW8015 Mod	01/13/20	01/23/20	JKR	GRO-DRO PHCC10C28 PI	
648595-002	S	BH05A	01/09/20 09:55	SW8015MOD_NM	TPH by SW8015 Mod	01/13/20	01/23/20	JKR	GRO-DRO PHCC10C28 PI	
648595-003	S	BH03	01/09/20 10:30	SW8015MOD_NM	TPH by SW8015 Mod	01/13/20	01/23/20	JKR	GRO-DRO PHCC10C28 PI	
648595-004	S	BH03A	01/09/20 10:35	SW8015MOD_NM	TPH by SW8015 Mod	01/13/20	01/23/20	JKR	GRO-DRO PHCC10C28 PI	
648595-005	S	BH04A	01/09/20 10:55	SW8015MOD_NM	TPH by SW8015 Mod	01/13/20	01/23/20	JKR	GRO-DRO PHCC10C28 PI	
648595-006	S	BH04B	01/09/20 11:10	SW8015MOD_NM	TPH by SW8015 Mod	01/13/20	01/23/20	JKR	GRO-DRO PHCC10C28 PI	
648595-007	S	BH09	01/09/20 11:40	SW8015MOD_NM	TPH by SW8015 Mod	01/13/20	01/23/20	JKR	GRO-DRO PHCC10C28 PI	
648595-008	S	BH09A	01/09/20 11:45	SW8015MOD_NM	TPH by SW8015 Mod	01/13/20	01/23/20	JKR	GRO-DRO PHCC10C28 PI	
648595-009	S	BH10	01/09/20 12:05	SW8015MOD_NM	TPH by SW8015 Mod	01/13/20	01/23/20	JKR	GRO-DRO PHCC10C28 PI	
648595-010	S	BH10A	01/09/20 12:10	SW8015MOD_NM	TPH by SW8015 Mod	01/13/20	01/23/20	JKR	GRO-DRO PHCC10C28 PI	
648595-011	S	BH11	01/09/20 12:25	SW8015MOD_NM	TPH by SW8015 Mod	01/13/20	01/23/20	JKR	GRO-DRO PHCC10C28 PI	
648595-012	S	BH11A	01/09/20 12:30	SW8015MOD_NM	TPH by SW8015 Mod	01/13/20	01/23/20	JKR	GRO-DRO PHCC10C28 PI	
648595-013	S	BH12	01/09/20 12:50	SW8015MOD_NM	TPH by SW8015 Mod	01/13/20	01/23/20	JKR	GRO-DRO PHCC10C28 PI	
648595-014	S	BH12A	01/09/20 12:55	SW8015MOD_NM	TPH by SW8015 Mod	01/13/20	01/23/20	JKR	GRO-DRO PHCC10C28 PI	

Inter Office Shipment or Sample Comments:

Relinquished By: Elizabeth McClellan

Date Relinquished: 01/10/2020

Received By: Brianna Teel

Date Received: 01/13/2020 07:13

Cooler Temperature:

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 55824

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

Sent By: Elizabeth McClellan **Date Sent:** 01/10/2020 12:18 PM

Received By: Brianna Teel **Date Received:** 01/13/2020 07:13 AM

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?		
#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: 01/13/2020

Brianna Teel

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 01.09.2020 04.40.00 PM

Work Order #: 648595

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)?	2.2
#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: 01.09.2020

Checklist reviewed by: Jessica Kramer Date: 01.10.2020

Jessica Kramer