

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

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

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

Incident ID	NVV2003155809
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party	XTO Energy	OGRID	5380
Contact Name	Kyle Littrell	Contact Telephone	432-221-7331
Contact email	Kyle_Littrell@xtoenergy.com	Incident # (assigned by OCD)	NVV2003155809
Contact mailing address	522 W. Mermod, Carlsbad, NM 88220		

Location of Release Source

Latitude 32.179809 Longitude -103.827822
 (NAD 83 in decimal degrees to 5 decimal places)

Site Name	Poker Lake Unit DTD #36 SWD	Site Type	SWD
Date Release Discovered	1/9/2020	API# (if applicable)	30-015-45237 (PLU 36-DTD STATE SWD #001)

Unit Letter	Section	Township	Range	County
A	36	24S	30E	EDDY

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

Nature and Volume of Release

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

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	0.0	Volume Recovered (bbls)	0.0
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls)	45.0	Volume Recovered (bbls)	45.0
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
<input type="checkbox"/> Condensate	Volume Released (bbls)		Volume Recovered (bbls)	
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)		Volume Recovered (Mcf)	
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)		Volume/Weight Recovered (provide units)	

Cause of Release: 1/4" carbon steel nipple leaked due to corrosion. The nipple completely broke off of filter pot. This resulted in a release of 45 bbls of produced water into an impermeable containment with 45 bbls being recovered. A 48-hour advance notice of liner inspection was provided by email to NMOCD District 2. The liner was visually inspected and determined to be insufficient. Additional delineation for deferral will be completed by a third party contractor.

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Was this a major release as defined by 19.15.29.7(A) NMAC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? YES – An unauthorized release of fluid over 25 barrels.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? YES, by Adrian Baker : Bratcher, Mike, EMNRD; Venegas, Victoria, EMNRD; 'Hamlet, Robert, EMNRD'; 'rmann@slo.state.nm.us' ; by email Friday, January 10, 2020 9:30 AM	

Initial Response

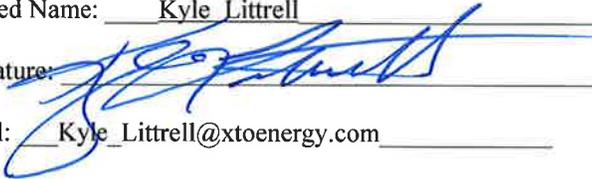
The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.
--

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

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

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

Printed Name: <u>Kyle Littrell</u>	Title: <u>SH&E Supervisor</u>
Signature: 	Date: <u>1-24-20</u>
email: <u>Kyle_Littrell@xtoenergy.com</u>	Telephone: _____

<u>OCD Only</u>	
Received by: <u>Victoria Venegas</u>	Date: <u>01/31/2020</u>

Incident ID	NVV2003155809
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Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	>100 (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

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

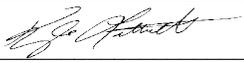
Characterization Report Checklist: *Each of the following items must be included in the report.*

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

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

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

Printed Name: Kyle Littrell Title: SH&E Supervisor
Signature:  Date: 3/11/2020
email: Kyle_Littrell@xtoenergy.com Telephone: (432) 221-7331

OCD Only

Received by: _____ Date: _____

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Application ID	

Closure

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

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

- A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- Description of remediation activities

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

Printed Name: Kyle Littrell Title: SH&E Supervisor
 Signature:  Date: 3/12/2020
 email: Kyle_Littrell@xtoenergy.com Telephone: (432) 221-7331

OCD Only

Received by: _____ Date: _____

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____



LT Environmental, Inc.

3300 North "A" Street
Building 1, Unit 222
Midland, Texas 79705
432.704.5178

March 17, 2020

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

**RE: Closure Request
Poker Lake Unit DTD #36 SWD
Incident Number NVV2003155809
Eddy County, New Mexico**

Dear Mr. Bratcher:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following Closure Request detailing site assessment and soil sampling activities at the Poker Lake Unit DTD #36 Salt Water Disposal (SWD) (Site) in Unit A, Section 36, Township 24 South, Range 30 East, in Eddy County, New Mexico (Figure 1). The purpose of the site assessment and soil sampling activities was to confirm the presence or absence of impact to soil by a release of produced water at the Site. Based on field observations, field screening, and laboratory analytical results from soil sampling activities, XTO is submitting this Closure Request and requesting no further action (NFA) for Incident Number NVV2003155809.

RELEASE BACKGROUND

On January 9, 2020, a one-fourth inch carbon steel nipple was leaking due to corrosion and broke off of the filter pot resulting in the release of 45.0 barrels (bbls) of produced water inside an impermeable containment. A vacuum truck was immediately dispatched to the Site to recover freestanding fluids, of which approximately 45.0 bbls of produced water were recovered. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 (Form C-141) on January 24, 2020. A 48-hour advance notice of liner inspection was provided via email to NMOCD District 2 and, upon inspection, the liner was determined to be insufficient.

SITE CHARACTERIZATION

LTE characterized the Site according to Table 1, *Closure Criteria for Soils Impacted by a Release*, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest groundwater well data. The closest permitted groundwater well with depth to groundwater data is United States Geological Survey (USGS) well 320739103584201, located approximately 1.3 miles southwest of the Site. The groundwater well



has a reported depth to groundwater of 446 feet bgs and a total depth of 480 feet bgs. Several New Mexico Office of the State Engineer (NMOSE) wells are closer to the Site than USGS 320739103584201, however, those wells, C 03558 to the north and C 03894 to the south, have no recorded depth to groundwater data.

The closest continuously flowing water or significant watercourse to the Site is an unnamed dry wash, located approximately 2.3 miles west of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is located in a low potential karst area.

CLOSURE CRITERIA

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

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

SITE ASSESSMENT AND SOIL SAMPLING ACTIVITIES

On February 4, 2020, LTE evaluated the release extent based on information provided on the Form C-141 and visual observations. LTE personnel advanced a borehole via hand-auger at one location within the lined tank battery containment on the northeastern edge of the caliche well pad. Site assessment activities and vertical delineation soil sampling was completed at the location of the hole found during the liner integrity inspection conducted by XTO. Two soil samples were collected at one foot and two feet bgs (BH01 through BH01A). Soil from the borehole was field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photo-ionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. Field screening results and observations for each sample were documented on a lithologic/soil sampling log and are included as Attachment 1. The borehole was backfilled with the soil removed and XTO repaired the liner. The borehole and vertical delineation soil sample location are depicted on Figure 2. Photographic documentation was conducted during the Site visit. Photographs are included in Attachment 2.



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

ANALYTICAL RESULTS

Laboratory analytical results for delineation soil samples BH01 through BH01A, collected at depths ranging from one foot to two feet bgs, indicated benzene, BTEX, TPH-GRO, TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Laboratory analytical results are presented on Figure 2 and summarized in Table 1. The complete laboratory analytical reports are included as Attachment 3.

CLOSURE REQUEST

Following the failed liner integrity inspection, LTE personnel advanced one borehole in the location of the hole in the compromised liner. Delineation soil samples BH01 through BH01A were collected from within the lined tank battery containment from depths ranging from one foot to two feet bgs to assess for the presence or absence of soil impacts as a result of the January 9, 2020 produced water release. Laboratory analytical results indicated that benzene, BTEX, TPH-GRO, TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria in soil samples BH01 and BH01A at depths of approximately one foot and two feet bgs, respectively. After the delineation samples were collected, XTO repaired the liner. As such, XTO respectfully requests NFA for Incident Number NVV2003155809.



Bratcher, M.
Page 4

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

Sincerely,

LT ENVIRONMENTAL, INC.

A handwritten signature in black ink that reads 'Elizabeth A. Naka'.

Elizabeth A. Naka
Staff Environmental Scientist

A handwritten signature in black ink that reads 'Ashley L. Ager'.

Ashley L. Ager, P.G.
Senior Geologist

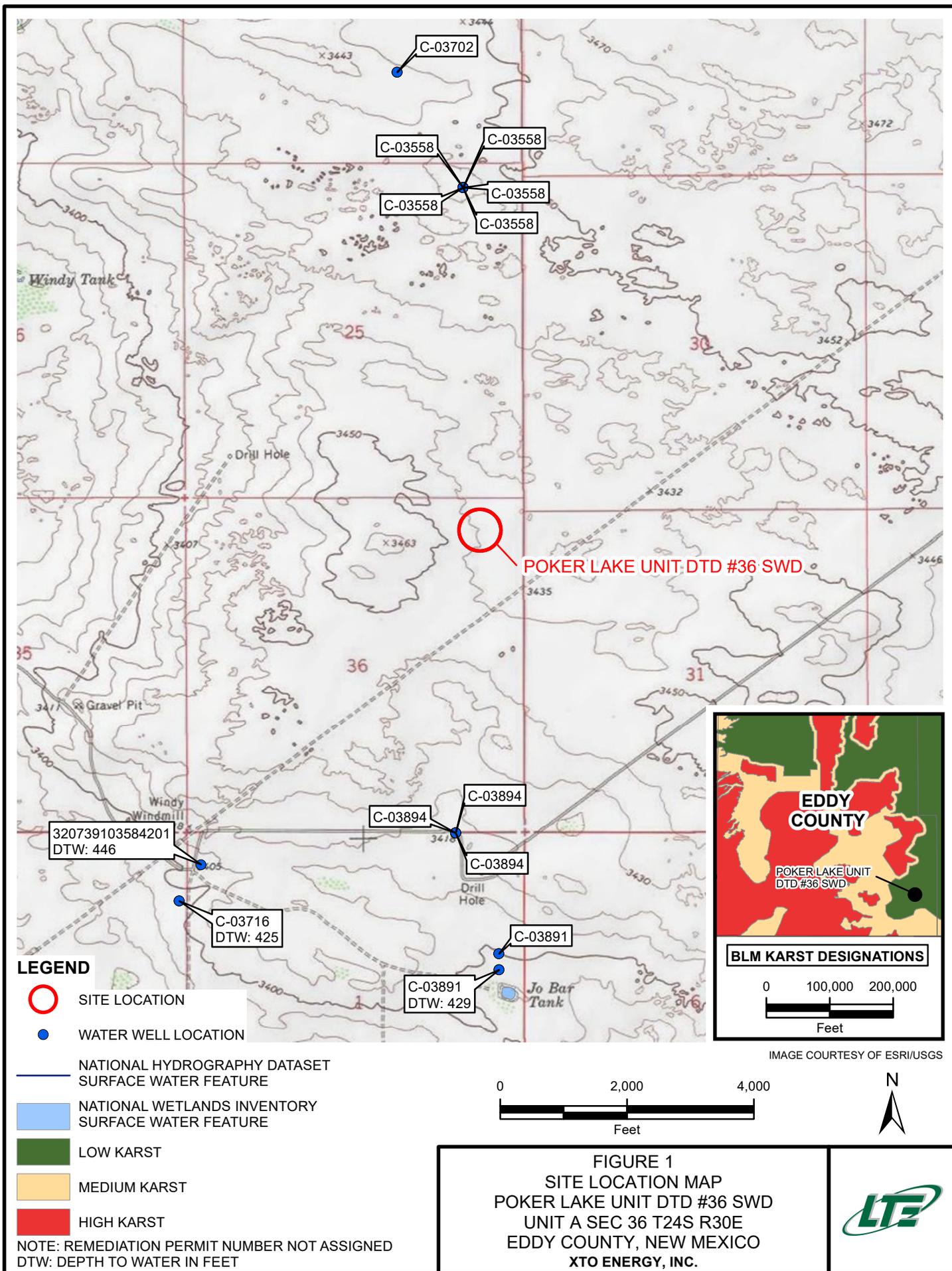
cc: Kyle Littrell, XTO
United States Bureau of Land Management – New Mexico
Robert Hamlet, NMOCD
Victoria Venegas, NMOCD

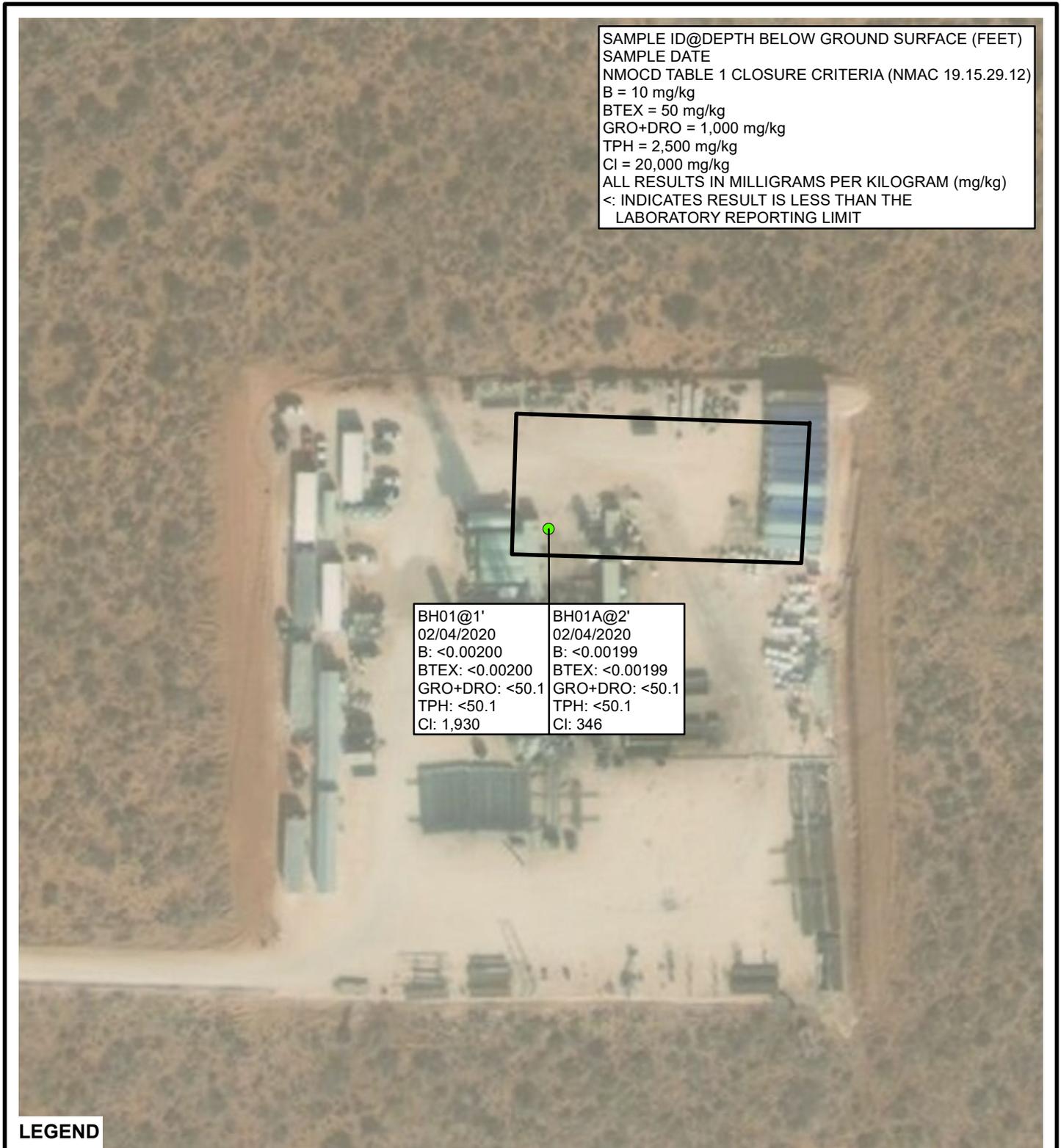
Appendices:

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

FIGURES







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

BH01@1' 02/04/2020 B: <0.00200 BTEX: <0.00200 GRO+DRO: <50.1 TPH: <50.1 Cl: 1,930	BH01A@2' 02/04/2020 B: <0.00199 BTEX: <0.00199 GRO+DRO: <50.1 TPH: <50.1 Cl: 346
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LEGEND

- DELINEATION SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- CONTAINMENT AREA
- 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
- NOTE: REMEDIATION PERMIT NUMBER NOT ASSIGNED

IMAGE COURTESY OF ESRI

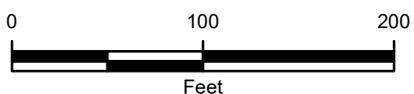


FIGURE 2
 DELINEATION SOIL SAMPLE LOCATIONS
 POKER LAKE UNIT DTD #36 SWD
 UNIT A SEC 36 T24S R30E
 EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.



TABLES



**TABLE 1
SOIL ANALYTICAL RESULTS**

**POKER LAKE UNIT DTD #36 SWD
REMEDIATION PERMIT NUMBER NOT ASSIGNED
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)
NMOCD Table 1 Closure Criteria			10	NE	NE	NE	50	NE	NE	NE	1,000	2,500	20,000
BH01	1	02/04/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	1,930
BH01A	2	02/04/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.1	<50.1	<50.1	<50.1	<50.1	346

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

ATTACHMENT 1: LITHOLOGIC / SOIL SAMPLING LOG





LT Environmental, Inc.
Assuring Security



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

Compliance · Engineering · Remediation

Identifier: **BH01**

Date: **2/4/20**

Project Name:
PLU DTD #36

RP Number:
**1/9/20 spill date
010920015**

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: **JH**

Method: **Hand Auger**

Lat/Long:

Field Screening:

PID, Chlorides

Hole Diameter: **3"**

Total Depth: **2'**

Comments:

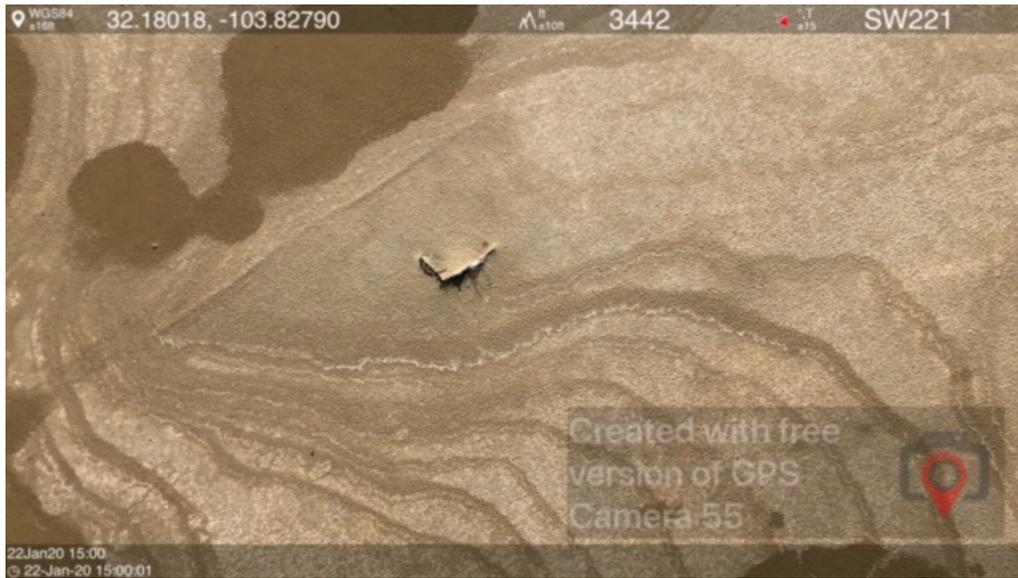
TD @ 2'

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
m	6.4 1980	0.5	N	BH01	1	1'	SP	Poorly graded, fine sand Brownish red low plasticity, no odor
m	2.4 347.2	0.4	N	BH01A	2	2'	SP	Poorly graded, fine sand Brownish red low plasticity, no odor
					3			TD @ 2'
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

ATTACHMENT 2: PHOTOGRAPHIC LOG



PHOTOGRAPHIC LOG



Photograph 1: View of area where liner was determined to be insufficient.



Photograph 2: View of delineation soil sample location facing east.

ATTACHMENT 3: LABORATORY ANALYTICAL REPORTS



Analytical Report 651532

for
LT Environmental, Inc.

Project Manager: Dan Moir

PLU DTD #36

012920015

10-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)



10-FEB-20

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

Reference: XENCO Report No(s): **651532**
PLU DTD #36
Project Address:

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 651532. 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. 651532 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

A handwritten signature in black ink that reads 'Jessica Kramer'.

Jessica Kramer
Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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



Sample Cross Reference 651532

LT Environmental, Inc., Arvada, CO

PLU DTD #36

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH01A	S	02-04-20 13:50	2 ft	651532-001
BH01	S	02-04-20 13:30	1 ft	651532-002



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU DTD #36

Project ID: 012920015
Work Order Number(s): 651532

Report Date: 10-FEB-20
Date Received: 02/06/2020

Sample receipt non conformances and comments:

V1.001 - Revised report due to mislabeling of samples 001 & 002. This data more correctly aligns with field screenings. JK 02/10/20

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3115845 BTEX by EPA 8021B

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



Certificate of Analysis Summary 651532

LT Environmental, Inc., Arvada, CO

Project Name: PLU DTD #36

Project Id: 012920015
Contact: Dan Moir
Project Location:

Date Received in Lab: Thu Feb-06-20 08:50 am
Report Date: 10-FEB-20
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	651532-001	651532-002			
	<i>Field Id:</i>	BH01A	BH01			
	<i>Depth:</i>	2- ft	1- ft			
	<i>Matrix:</i>	SOIL	SOIL			
	<i>Sampled:</i>	Feb-04-20 13:50	Feb-04-20 13:30			
BTEX by EPA 8021B	<i>Extracted:</i>	Feb-06-20 10:37	Feb-06-20 10:37			
	<i>Analyzed:</i>	Feb-06-20 14:07	Feb-06-20 14:27			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL			
Benzene		<0.00199 0.00199	<0.00200 0.00200			
Toluene		<0.00199 0.00199	<0.00200 0.00200			
Ethylbenzene		<0.00199 0.00199	<0.00200 0.00200			
m,p-Xylenes		<0.00398 0.00398	<0.00401 0.00401			
o-Xylene		<0.00199 0.00199	<0.00200 0.00200			
Total Xylenes		<0.00199 0.00199	<0.00200 0.00200			
Total BTEX		<0.00199 0.00199	<0.00200 0.00200			
Chloride by EPA 300	<i>Extracted:</i>	Feb-06-20 10:50	Feb-06-20 10:50			
	<i>Analyzed:</i>	Feb-06-20 12:25	Feb-06-20 12:31			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL			
Chloride		346 10.0	1930 49.8			
TPH by SW8015 Mod	<i>Extracted:</i>	Feb-06-20 10:30	Feb-06-20 10:30			
	<i>Analyzed:</i>	Feb-06-20 12:54	Feb-06-20 12:54			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL			
Gasoline Range Hydrocarbons (GRO)		<50.1 50.1	<50.1 50.1			
Diesel Range Organics (DRO)		<50.1 50.1	<50.1 50.1			
Motor Oil Range Hydrocarbons (MRO)		<50.1 50.1	<50.1 50.1			
Total GRO-DRO		<50.1 50.1	<50.1 50.1			
Total TPH		<50.1 50.1	<50.1 50.1			

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

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

Version: 1.0%

Jessica Kramer
Project Assistant



Certificate of Analytical Results 651532

LT Environmental, Inc., Arvada, CO

PLU DTD #36

Sample Id: **BH01A** Matrix: Soil Date Received: 02.06.20 08.50
 Lab Sample Id: 651532-001 Date Collected: 02.04.20 13.50 Sample Depth: 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 02.06.20 10.50 Basis: Wet Weight
 Seq Number: 3115840

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	346	10.0	mg/kg	02.06.20 12.25		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 02.06.20 10.30 Basis: Wet Weight
 Seq Number: 3115827

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	02.06.20 12.54	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	02.06.20 12.54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	02.06.20 12.54	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	02.06.20 12.54	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	02.06.20 12.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	02.06.20 12.54	
o-Terphenyl	84-15-1	94	%	70-135	02.06.20 12.54	



Certificate of Analytical Results 651532

LT Environmental, Inc., Arvada, CO

PLU DTD #36

Sample Id: BH01A	Matrix: Soil	Date Received: 02.06.20 08.50
Lab Sample Id: 651532-001	Date Collected: 02.04.20 13.50	Sample Depth: 2 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 02.06.20 10.37	Basis: Wet Weight
Seq Number: 3115845		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	02.06.20 14.07	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	02.06.20 14.07	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	02.06.20 14.07	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	02.06.20 14.07	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	02.06.20 14.07	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	02.06.20 14.07	U	1
Total BTEX		<0.00199	0.00199	mg/kg	02.06.20 14.07	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	100	%	70-130	02.06.20 14.07		
1,4-Difluorobenzene	540-36-3	104	%	70-130	02.06.20 14.07		



Certificate of Analytical Results 651532

LT Environmental, Inc., Arvada, CO

PLU DTD #36

Sample Id: BH01	Matrix: Soil	Date Received: 02.06.20 08.50
Lab Sample Id: 651532-002	Date Collected: 02.04.20 13.30	Sample Depth: 1 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 02.06.20 10.50	Basis: Wet Weight
Seq Number: 3115840		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1930	49.8	mg/kg	02.06.20 12.31		5

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DTH		% Moisture:
Analyst: DTH	Date Prep: 02.06.20 10.30	Basis: Wet Weight
Seq Number: 3115827		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	02.06.20 12.54	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	02.06.20 12.54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	02.06.20 12.54	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	02.06.20 12.54	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	02.06.20 12.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	02.06.20 12.54	
o-Terphenyl	84-15-1	96	%	70-135	02.06.20 12.54	



Certificate of Analytical Results 651532

LT Environmental, Inc., Arvada, CO

PLU DTD #36

Sample Id: BH01	Matrix: Soil	Date Received: 02.06.20 08.50
Lab Sample Id: 651532-002	Date Collected: 02.04.20 13.30	Sample Depth: 1 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 02.06.20 10.37	Basis: Wet Weight
Seq Number: 3115845		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.06.20 14.27	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.06.20 14.27	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.06.20 14.27	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	02.06.20 14.27	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.06.20 14.27	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.06.20 14.27	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.06.20 14.27	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	104	%	70-130	02.06.20 14.27		
4-Bromofluorobenzene	460-00-4	98	%	70-130	02.06.20 14.27		



LT Environmental, Inc.

PLU DTD #36

Analytical Method: Chloride by EPA 300

Seq Number: 3115840

MB Sample Id: 7696132-1-BLK

Matrix: Solid

LCS Sample Id: 7696132-1-BKS

Prep Method: E300P

Date Prep: 02.06.20

LCSD Sample Id: 7696132-1-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	258	103	90-110	0	20	mg/kg	02.06.20 11:53	

Analytical Method: Chloride by EPA 300

Seq Number: 3115840

Parent Sample Id: 651528-001

Matrix: Soil

MS Sample Id: 651528-001 S

Prep Method: E300P

Date Prep: 02.06.20

MSD Sample Id: 651528-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	370	201	580	104	588	108	90-110	1	20	mg/kg	02.06.20 12:09	

Analytical Method: Chloride by EPA 300

Seq Number: 3115840

Parent Sample Id: 651533-007

Matrix: Soil

MS Sample Id: 651533-007 S

Prep Method: E300P

Date Prep: 02.06.20

MSD Sample Id: 651533-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	6740	996	8010	128	8000	127	90-110	0	20	mg/kg	02.06.20 14:01	X

Analytical Method: TPH by SW8015 Mod

Seq Number: 3115827

MB Sample Id: 7696122-1-BLK

Matrix: Solid

LCS Sample Id: 7696122-1-BKS

Prep Method: SW8015P

Date Prep: 02.06.20

LCSD Sample Id: 7696122-1-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	1150	115	1030	103	70-135	11	35	mg/kg	02.06.20 11:56	
Diesel Range Organics (DRO)	<50.0	1000	1170	117	1040	104	70-135	12	35	mg/kg	02.06.20 11:56	

Surrogate

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	95		127		111		70-135	%	02.06.20 11:56
o-Terphenyl	93		115		104		70-135	%	02.06.20 11:56

Analytical Method: TPH by SW8015 Mod

Seq Number: 3115827

MB Sample Id: 7696122-1-BLK

Matrix: Solid

Prep Method: SW8015P

Date Prep: 02.06.20

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	02.06.20 11:37	

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

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

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

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



LT Environmental, Inc.

PLU DTD #36

Analytical Method: TPH by SW8015 Mod

Seq Number: 3115827

Parent Sample Id: 651528-001

Matrix: Soil

MS Sample Id: 651528-001 S

Prep Method: SW8015P

Date Prep: 02.06.20

MSD Sample Id: 651528-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.2	1000	1110	111	1130	113	70-135	2	35	mg/kg	02.06.20 12:15	
Diesel Range Organics (DRO)	<50.2	1000	1130	113	1180	118	70-135	4	35	mg/kg	02.06.20 12:15	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	121		124		70-135	%	02.06.20 12:15
o-Terphenyl	111		113		70-135	%	02.06.20 12:15

Analytical Method: BTEX by EPA 8021B

Seq Number: 3115845

MB Sample Id: 7696134-1-BLK

Matrix: Solid

LCS Sample Id: 7696134-1-BKS

Prep Method: SW5030B

Date Prep: 02.06.20

LCSD Sample Id: 7696134-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.109	109	0.0915	92	70-130	17	35	mg/kg	02.06.20 11:44	
Toluene	<0.00200	0.100	0.105	105	0.0845	85	70-130	22	35	mg/kg	02.06.20 11:44	
Ethylbenzene	<0.00200	0.100	0.0992	99	0.0744	74	71-129	29	35	mg/kg	02.06.20 11:44	
m,p-Xylenes	<0.00400	0.200	0.204	102	0.151	76	70-135	30	35	mg/kg	02.06.20 11:44	
o-Xylene	<0.00200	0.100	0.103	103	0.0783	78	71-133	27	35	mg/kg	02.06.20 11:44	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		104		102		70-130	%	02.06.20 11:44
4-Bromofluorobenzene	96		97		96		70-130	%	02.06.20 11:44

Analytical Method: BTEX by EPA 8021B

Seq Number: 3115845

Parent Sample Id: 651528-001

Matrix: Soil

MS Sample Id: 651528-001 S

Prep Method: SW5030B

Date Prep: 02.06.20

MSD Sample Id: 651528-001 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	0.0990	0.121	122	0.103	103	70-130	16	35	mg/kg	02.06.20 12:25	
Toluene	<0.00198	0.0990	0.117	118	0.0984	98	70-130	17	35	mg/kg	02.06.20 12:25	
Ethylbenzene	<0.00198	0.0990	0.112	113	0.0945	95	71-129	17	35	mg/kg	02.06.20 12:25	
m,p-Xylenes	<0.00396	0.198	0.231	117	0.194	97	70-135	17	35	mg/kg	02.06.20 12:25	
o-Xylene	<0.00198	0.0990	0.115	116	0.0969	97	71-133	17	35	mg/kg	02.06.20 12:25	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		105		70-130	%	02.06.20 12:25
4-Bromofluorobenzene	98		99		70-130	%	02.06.20 12:25

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

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

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

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



Chain of Custody

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334
 Midland, TX (432-704-5440) EL Paso, TX (915)585-3443 Lubbock, TX (806)794-1296
 Hobbs, NM (575-392-7550) Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8900) Tampa, FL (813-620-2000)

Work Order No: 451532

Project Manager: Dan Moir
 Company Name: LT Environmental, Inc., Permian office
 Address: 3300 North A Street
 City, State ZIP: Midland, TX 79705
 Phone: 432.704.5178
 Email: ggreen@ltenv.com ; dmoir@ltenv.com

Bill to: (if different) Kyle Litrell
 Company Name: XTO
 Address: 533 W. Merand St.
 City, State ZIP: Midland, TX 79706
 Cushman, MN 55330

Program: UST/PST PRP Brownfields RC Superfund
 State of Project: Level II Level III ST/UST PRP Level IV
 Deliverables: EDD ADAPT Other:

Project Name: PLU DTD #36 Turn Around
 Project Number: 018920015 Routine
 P.O. Number: 1/4/20 Sp. 11 det Rush: 24 hr
 Sampler's Name: Gregory Steerway Hill Due Date: 2/4/20

SAMPLE RECEIPT Temp Blank: Yes No Wet Ice: Yes No
 Temperature (°C): 8.6 Thermometer ID
 Received In tact: Yes No Correction Factor: T - -MM-001
 Cooler Custody Seals: Yes No N/A Total Containers: 2
 Sample Custody Seals: Yes No N/A

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers			Work Order Notes
					TPH (EPA 8015)	BTEX (EPA 0-8021)	Chloride (EPA 300.0)	
<u>Bt01</u>	<u>S</u>	<u>2/4/20</u>	<u>1330</u>	<u>1'</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<u>discrete</u>
<u>Bt01A</u>	<u>S</u>	<u>2/4/20</u>	<u>1350</u>	<u>2'</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<u>discrete</u>

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

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

Relinquished by: (Signature) [Signature] Received by: (Signature) [Signature] Date/Time 2/6/20 08:50

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 02.06.2020 08.50.00 AM

Work Order #: 651532

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)?	No
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by:


Elizabeth McClellan

Date: 02.06.2020

Checklist reviewed by:


Jessica Kramer

Date: 02.07.2020